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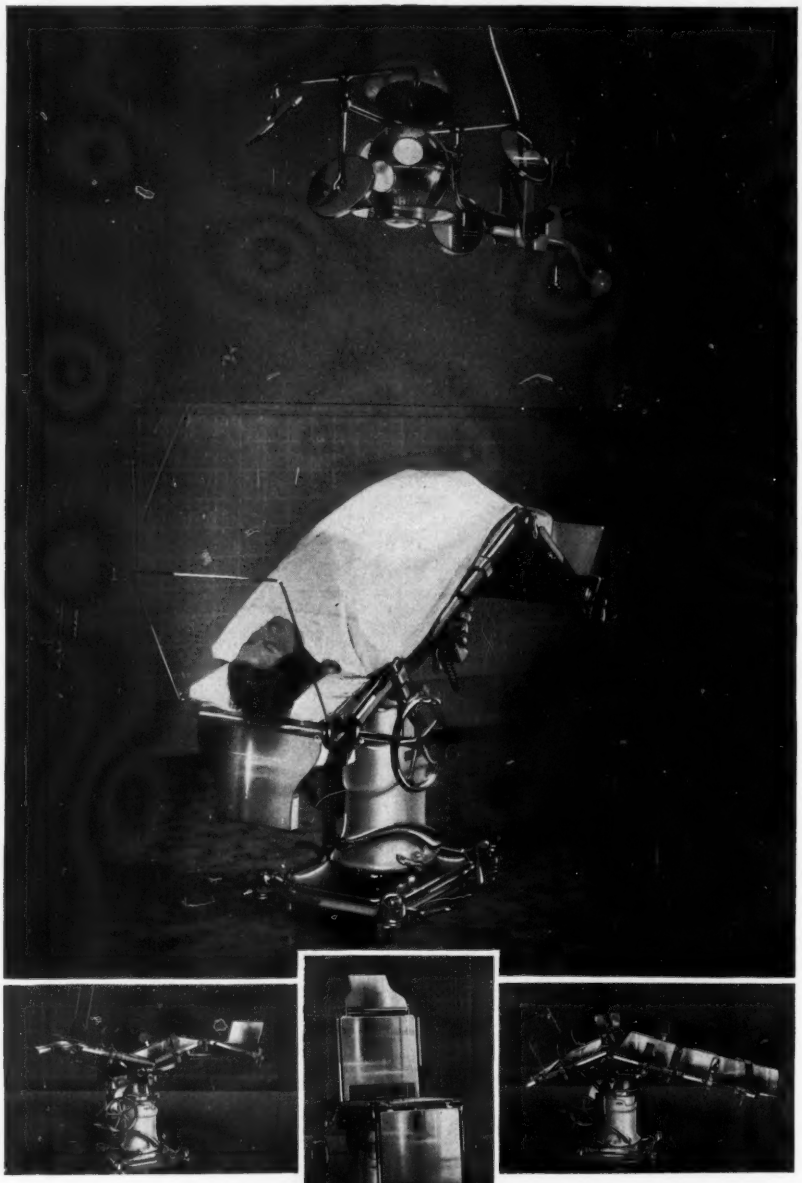

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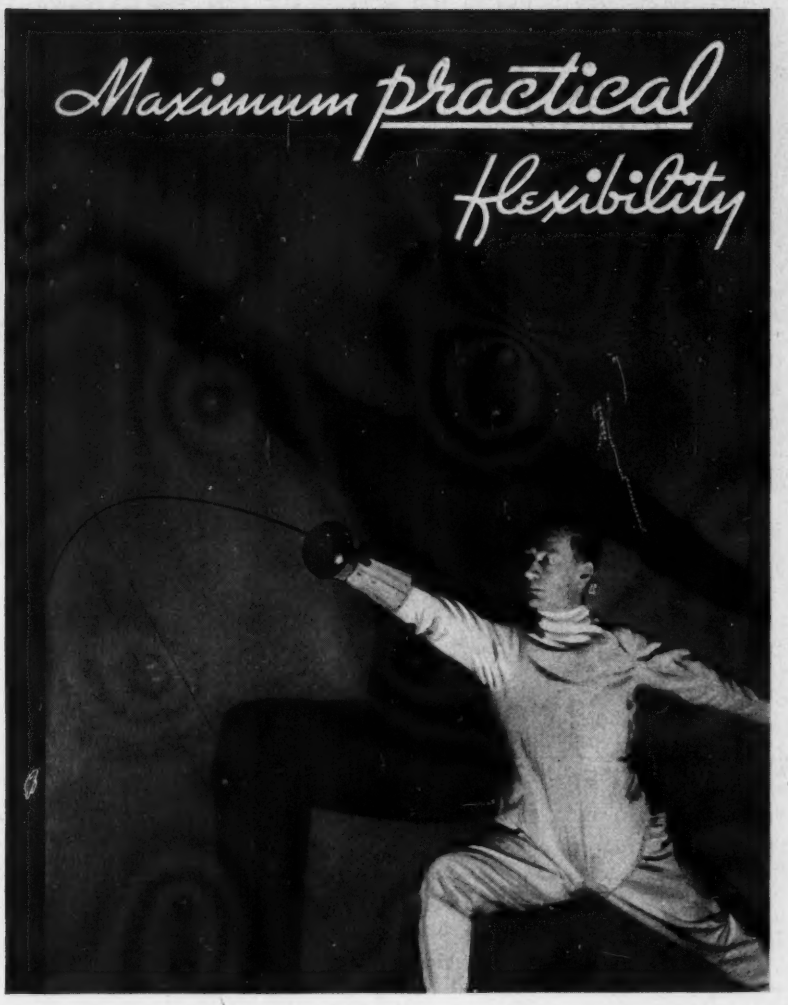

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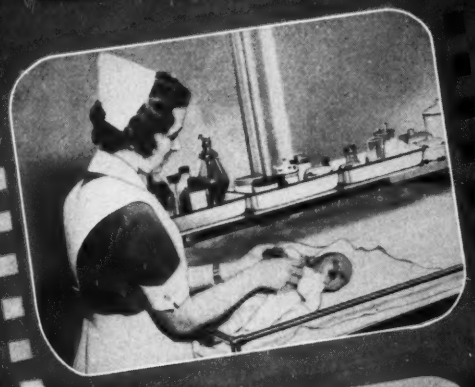

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January, 1936

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Our Contributors

PROF. IRA V. HISCOCK, a sanitarian of international reputation, a recognized authority on all matters pertaining to the control of disease, and professor of public health, Yale University College of Medicine, defines in this issue the "Mutual Interests of Hospitals and Public Health Organizations."

DR. C. H. LAVINDER, assistant surgeon general of the United Public Health Service, author and editor, and formerly in charge of the hospitals of the United States Public Health Service, discusses the "Widening Horizons in the Public Health Service."

SISTER JOHN GABRIEL, author and educator, a member of the Sisters of Charity of Providence; which represents among its other activities approximately 42 hospitals; and a recognized leader in nursing education in North America, writes most interestingly on "The Hospital and the Changing Social Order."

MRS. JEWELL W. THRASHER, superintendent of the Frazier-Ellis Hospital, Dothan, Ala., and one of the best-known hospital administrators in the South, discusses the "Value of Psychology in the Rural Hospital."

DR. J. J. GOLUB, director of the Hospital for Joint Diseases in New York City, and a student of sociology, outlines the social science relationship to hospital administration in a very interesting contribution on "What Knowledge of Social Service Does the Hospital Executive Need."

MR. CHARLES F. NEERGAARD, one of the most prominent hospital consultants, and adviser to several Eastern hospitals, covers the ideal arrangement and construction of new hospital facilities in his article on "Hagerstown's New Hospital."

MISS BLANCHE PFEFFERKORN, director of studies of the National League of Nursing Education, contributes an exceptionally fine analysis of "Nursing Costs, Nursing Service, and Nursing Care."

DR. EMANUEL GIDDINGS, medical superintendent, and DR. NATHAN SMITH, deputy medical superintendent of the Morrisania City Hospital, present an interesting study on "Practical Advice in Training of Interns."

DR. A. F. BRANTON, superintendent of the Willmar Hospital, Willmar, Minn., brings to the attention of the hospital field the widening range of opportunities for the small hospital in his article entitled "The Small Hospital—Its Opportunities for Community Service Other Than Hospitalization."

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MR. JOHN A. MCNAMARA, well known to the hospital field as an editor and author, and now director of the Cleveland Hospital Service Association, collaborating with MR. MICHAEL A. KELLY, assistant director, will attract the attention of the hospital field and particularly of those interested in group hospitalization with his article "The Cleveland Plan Grows Up."

MR. S. FRANK ROACH, superintendent of laundry, Jersey City Medical Center, Jersey City, N. J., one of the experts in his field, calls attention to the many practical advantages in laundry operation in his article on "Weighing the Hospital Laundry Problem."

MR. H. ELDRIDGE HANNAFORD, well-known architect who has made a special study of hospital architecture and construction, discusses a subject of special interest to hospital administrators in his contribution on "Hospital Elevators."

MISS CAROLYN E. DAVIS, superintendent of the Good Samaritan Hospital, Portland, Oregon, a leader in the hospital field in the northwest, who has for many years taken an active part in hospital and nursing activities, discusses from the superintendent's standpoint "The Role of the Hospital in the Education of Doctors, Nurses and Others Engaged in the Care o fthe Sick."

DR. WILSON W. KNOWLTON, assistant superintendent of the Peter Bent Brigham Hospital, Boston, Mass., discusses from the standpoint of the hospital administrator "Autopsies—Funeral Directors—and More Autopsies."

MISS KATHERINE MITCHELL, director of the Department of Dietetics, Michael Reese Hospital, Chicago, and a leading authority on nutrition, discusses "The Dietitian as a Part of Hospital Administration."

DR. LEWIS A. SEXTON, former president of the American Hospital Association and superintendent of Hartford Hospital, Hartford, Conn., makes a valuable contribution in his discussion of "Hospital Hazards."

DR. B. W. BLACK, medical director of the Alameda County Hospital, Oakland, Calif., and a recognized authority on hospital administration, presents a valuable outline on "Hospital Organization."

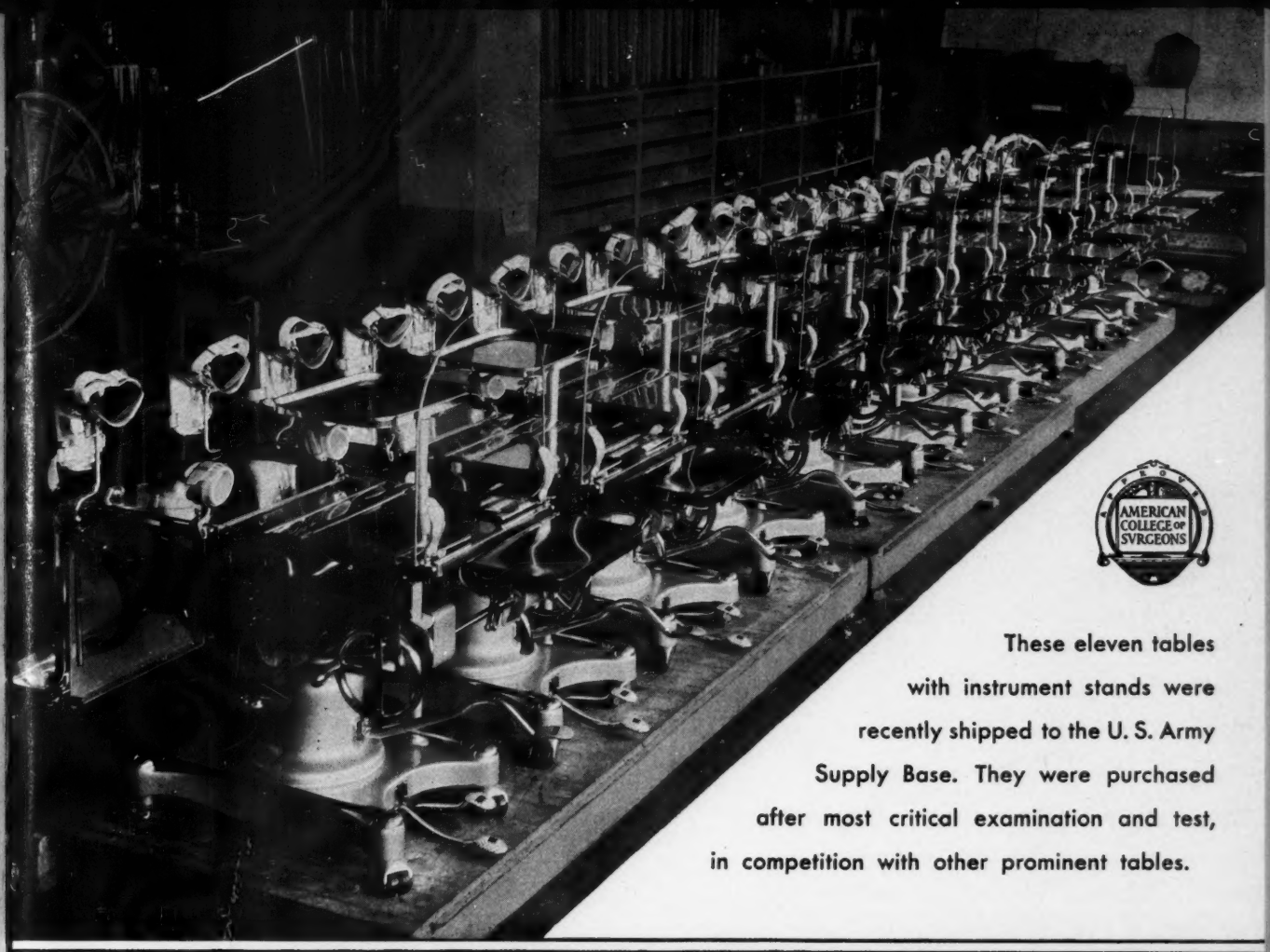
DR. DONALD C. SMELZER, medical director of the Graduate Hospital, Philadelphia, Pa., covers a very important hospital activity, and one of particular interest to the administrator, in his article on "The Hospital Housekeeping Department."

THE HONORABLE B. W. POWELL, manager of financial relations of the Federal Housing Administration of Arkansas, submits fourteen questions and answers on the "Modernization Credit as It Affects Hospitals."

DR. F. R. BRADLEY, assistant superintendent of Barnes Hospital, St. Louis, Mo., makes a valuable contribution in this issue with his article on "Hospital Painting."

DR. T. K. GRUBER, medical and general superintendent, Eloise Hospital and Infirmary, Eloise, Mich., and one of the leading hospital authorities in the United States, gives timely counsel to hospitals on the subject of "Purchase or Manufacture Electric Current?"

DR. C. W. MUNGER, president-elect of the American Hospital Association and chairman of the Committee on Air Conditioning, presents, together with his associates on the Committee, one of the most valuable reports submitted in his report on "Air Conditioning in Hospitals."



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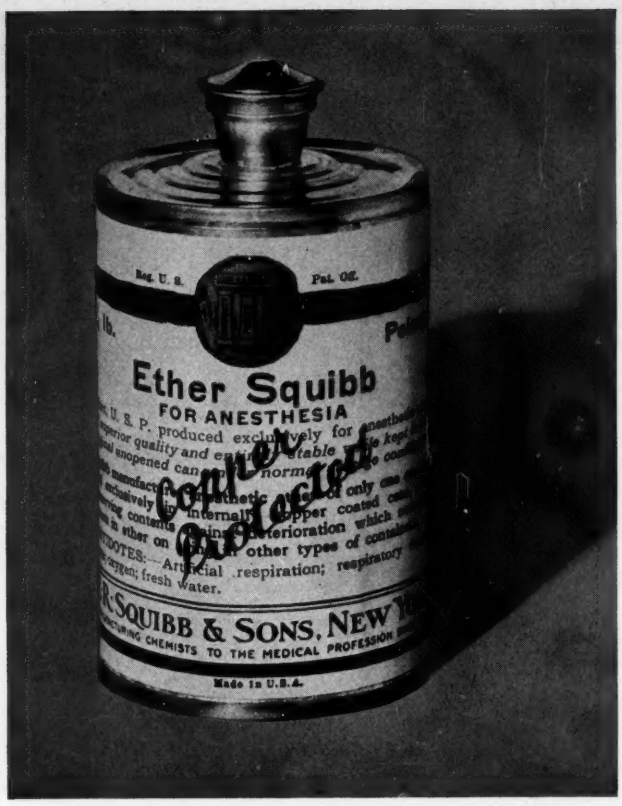

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HOSPITALS

THE JOURNAL OF THE AMERICAN HOSPITAL ASSOCIATION

VOL. 10 • JANUARY, 1936 • No. 1

Mutual Interests of Hospitals and Public Health Organizations

IRA V. HISCOCK

Professor of Public Health, Yale School of Medicine

ADVANCES in medical science have broadened the horizon of hospitals and public health organizations, increasing their scope of community services and their opportunities for cooperative enterprises. The interrelationship of many problems affecting both the hospitals and the health agencies requires that continuous efforts be made, based on periodic appraisals, to secure the correlation of activities in a manner to insure economy and efficiency in administration. It is also of some concern that medical and hospital services tend to concentrate in population centers,[1] while public health facilities are likewise more highly developed in urban communities than in rural sections of the United States. This uneven distribution creates problems of medical care and public health of some magnitude.

The modern hospital touches at some point almost every phase of the public health program which is organized to secure environmental sanitation, communicable disease control, early discovery and preventive treatment of disease, and the education of the public in the principles of healthy living. Furthermore, the public is coming to recognize the hospital not merely as a place to go when sick, but also as a place where aid is given to maintain health. To quote from Sigerist: "In every country, the hospital is developing into the center of all therapeutic activity, where medicine is organized and coordinated, and the invalid is offered everything that is medically possible. In America even now, about eight million people a year apply for hospital treatment and during a year 700,000 children are born in hospitals. This development will go further; hospitals will come to extend their functions until they include prophylaxis and grow to be veritable centers for the preservation and restoration of the health of the community."[2] The extension of functions must obviously be based on studies of local conditions to insure a balanced program with the resources for private medical supervision, and the preventive work of hospitals and health organizations properly coordinated.

The conservation of public health has long been recognized as one of the essential functions of government; and the authorized force created by a governmental unit for health administration is the health department. However, the voluntary agency occupies

[1]Only about 31 per cent of all physicians and 22 per cent of all dentists are located in communities of less than 5,000 population, but they attempt to serve nearly half of the people of the United States. The cooperative rural hospital programs of the Commonwealth Fund and of the Duke Foundation, and the plantation health and hospital services in Hawaii are valuable contributions to the rural program.

Presented before the Connecticut Hospital Association, Bridgeport, Conn., November 22, 1935.

[2]American Medicine, Henry E. Sigerist, W. W. Norton & Co., New York, 1934.

a place in a community health program for the conduct of certain important activities for which the local official agency is usually not equipped or ready, for the support of adequate standards of service, and for experimentation and demonstration in pioneer fields. On the hospital side of this picture, nearly two-thirds of all beds and 27 per cent of the hospitals are government owned; but 47 per cent of the institutions (with 30 per cent of the beds) are controlled by non-profit-making associations; and 26 per cent of the institutions (with 5 per cent of the beds) are proprietary hospitals, or hospitals run for profit. There are over twice as many general and special hospitals under private control as compared with government ownership, the latter group maintaining a preponderance of nervous and mental and tuberculosis institutions. As in the public health field, much has been accomplished in the elevation of standards of service by hospitals through the stimulus of non-official agencies.[3] In the further solution of public health and hospital problems, the continued cooperation of and joint planning by both official and non-official agencies are required in view of the important stake which each group holds in the organization.

District Health Organization

The greatest advances in public health in recent years have come through the development of full-time county and district health departments. There are some areas in the country which are too sparsely populated and have inadequate tax resources for the maintenance of full-time local health departments, although a combination of towns or even counties may be feasible. Whether the combination of a health and medical program built around a community hospital is the answer to this problem remains to be tested. With the passage in the last Connecticut legislature of an act permitting any group of towns, cities and boroughs to combine their public health activities and form a cooperative health district, the opportunity is offered to increase the effectiveness of local services of small communities through a program in which the hospitals might play an increasingly significant role in preventive medicine.

Specific Relationships

A large variety of organized relations between hospitals, clinics, and public health organizations is revealed by joint studies of the American Hospital Association and the Committee on Administrative Practice of the American Public Health Association. Four years ago, the Committee on Public Health Relations of the American Hospital Association listed many existing and acceptable forms of organized cooperation between public health agencies and agencies for the organized care of the sick.[4] In the care of communicable diseases, eight forms of cooperation are stated, each suited to certain conditions. Four forms of cooperation in relation to social service and seven in relation to nursing service are explained. Some twenty-two items are given regarding the use of the diagnostic and treatment facilities of hospitals and clinics in cooperation with official or voluntary public health work. These suggestions are helpful to a local community or agency as a means of promoting economy and effectiveness.

Essential Records

The sound conduct of health work is governed by information obtained from the careful analysis of reports of births, deaths, and cases of preventable diseases. Prompt reporting of these vital data will greatly facilitate the work of the health department and of other health organizations. Delay in reporting a case of communicable disease, for example, may cause the unnecessary spread of this disease, and reports of even suspicious cases are desirable. In Connecticut, as in some other states, it is also required that reports be made of physically handicapped children.

Where cooperative health work involving the care of patients exists, there should be mutual availability of records. In New Haven, for example, considerable information has been assembled concerning the cancer problem through the study of clinic, hospital, and vital statistics records by the Cancer Committee in cooperation with the agencies rendering service. Joint utilization of records is even more common in the fields of tuberculosis and child hygiene.

Communicable Diseases

The utilization by many health departments of private general hospitals for the care of acute communicable diseases is recognized as a sound policy which has advantages for both groups. The health department benefits from economy in cost of controlling communicable diseases and often from better service, while the hospital can offer a broader experience for its interns and student nurses. General hospitals may properly care for communicable diseases in a pavilion or ward equipped and made convenient for the practice of aseptic medical technique and should be encouraged to do so if an isolation hospital is lacking. The numerous and successful instances of cooperation in this field suggest their community value. In the development of such programs, the responsibilities of the health depart-

[3]Much credit is due the American College of Surgeons, the American Medical Association, and the American Hospital Association for the improvement in American hospitals.

(4) Report of the Committee on Public Health Relations, American Hospital Association, Bulletin of the American Hospital Association, V. (10), 98-121, October, 1931.

ment relate primarily to approval of quarters, equipment, et cetera, and to the admission and release of patients, but do not extend to administrative responsibility within the hospital. In the interest of sound and uniform accounting for health work, it is believed that methods of payment of public funds through other channels than the health department should be abandoned in favor of including all amounts expended for the control of communicable disease in the health department's budget.

Laboratories

The American Hospital Association has suggested certain policies in regard to laboratory service which are essentially realized in Connecticut. The State Department of Health provides an excellent laboratory service which aids local hospitals as well as physicians and health departments. This laboratory is equipped to conduct special studies, to continue an investigation beyond a point which might not be feasible for a small hospital laboratory, as well as to facilitate generally the investigation of disease and the control of public health problems. It has developed a practical system for approval of local hospital and health department laboratories which conforms to desirable specifications. Several health departments purchase laboratory service from privately operated hospitals. In such cases it is obviously essential that the technician be adequately trained in public health laboratory methods. The reverse form of cooperation, in which hospitals use the health department laboratory,[5] is chiefly for:

(a) Examinations for acute communicable diseases—diphtheria, typhoid, tuberculosis, syphilis or gonorrhea;

(b) Examinations of the more unusual conditions with which hospitals rarely deal—rabies, malaria and plague, chemical analysis of food and drugs, milk and water;

(c) Checking the work of their own laboratories, as in diphtheria and syphilis.

Just as the health department should know the adequacy of service for the organized care of the sick, in terms of type of care, bed capacity, et cetera, from the standpoint of community and public health interests, it must ascertain periodically the extent of hospital laboratory examinations to obtain a complete picture of resources in relation to needs.

Clinics and Health Centers

It has been suggested that every hospital should constitute itself a local health center for the neighborhood in which it is located.[6] Cooperation between hospitals and health departments in this field in general consists of the furnishing by the hospital of quarters and equipment while the health department provides some or all of the medical, dental, nursing, social service or clerical personnel. Local situations vary from complete control of the clinic by the hospital, with the health department merely cooperating in public health relations or perhaps by furnishing a flat financial subsidy, to the other extreme in which the hospital furnishes only the quarters and the health department provides all the personnel, supplies, drugs and other material.

The numerous examples fall into two main groups: The first is the clinic service which largely involves the diagnosis and treatment of diseases, such as tuberculosis, syphilis and gonorrhea clinics. The location of such clinics in the organized outpatient department of a hospital makes available diagnostic and treatment resources which are seldom provided as completely in isolated clinics. The growth of consultation diagnostic clinics is of interest in this connection. The second type of clinic is exemplified by the child health conference, in which the diagnostic and treatment facilities of the out-patient department are less important. But the economy in the use of the plant and personnel, as well as convenience of location, are factors to be considered, and frequently a decentralized plan will prove most helpful.

Some of the suggestions of the American Hospital report are as follows:

(a) All clinics engaging in curative medicine should be associated with recognized hospitals so that patients may have the advantages of modern diagnostic and therapeutic aids and the highest type of clinical care.

(b) In the event that health departments, whether state, provincial, county or city, wish to establish or subsidize local clinics, it is preferable that such clinics be placed in approved hospitals rather than in quarters provided by voluntary dispensaries or charitable organizations.

(c) Every general hospital, whether urban or rural, should have a diagnostic clinic or health inventorium which reputable physicians might utilize for periodic health examinations of their patients. More hospitals should be developed as health centers.

Miller has ably presented the educational and economic value of an out-patient department to a general hospital.[7] The educational advantages provided include:

(a) A training school for future staff members;

(b) Post-graduate training for the courtesy staff;

(c) Improvement in admitting service for the hospital;

[5]Relation Between Health Departments and Hospitals, Amer. Jour. P. H., March, 1928.

[6]Hospitals and the Public Health, Shirley W. Wynne, Weekly Bulletin, New York City Department of Health, April 5, 1930.

[7]James Raglan Miller, Bul. Amer. College of Surgeons, Jan., 1929.

(d) Follow-up service;
(e) Training in prognosis;
(f) Opportunity for scientific studies.

The economic values concern not only the hospital management, but the contributing public, the contributing patient and the practitioner himself. An effective hospital social service department may also be an important connecting link with the health organizations, and is responsible for discriminating use of community health resources, even though its primary purpose is to further the medical care of the patient through medical social case study, interpretation, and social treatment.[8]

There is a chain of influences which begins at the hospital and extends out to the individual home. The first of these is the out-patient department; the second is the health center; and the third is the public health nursing staff, often working in cooperation with a medical social service staff in carrying the health message into the individual home. While hospital and institutional care of illness is carried out under specialized services, the home services can best and most economically be conducted on a generalized district plan, the out-patient service forming the point of transition from the specialized to the generalized scheme. The modern physician is a key person in this modern preventive medicine program.[9]

Public Health Education

The hospital and the clinic have a responsibility for the education of both patients and personnel. The opportunities of health education in the clinic have been ably discussed by Galdston,[10] who urges that the clinic, instead of being only a place to which the lame and the halt go for cure, might also serve as a center where persons might be instructed on how to keep well. Our present-day knowledge of the nature of disease indicates that to cure a patient we must also teach him. Preventive medicine, even more than curative, depends for effectiveness upon education. Dr. Lawrason Brown, speaking on the role of education in the treatment of tuberculosis, said that he looked upon the sanatorium as a sort of college where men and women were re-educated in a newer method of living. If the tuberculosis patient needs to be re-educated to a newer method of life, many other types of patients, both in the clinics and in the hospitals, may likewise be served.

The clinic offers an excellent opportunity for general health education through visual methods and literature, and for special instruction regarding immunization against disease. Through physicians and nurses in maternity and children's hospitals, a unique opportunity for instruction in maternity and child care is provided.

The clinical-pathological conferences in some hospitals, besides special lecture series, are valuable from a public health viewpoint as well as for clinical purposes. High standards of medical and surgical practice favorably influence the public health experience of a community. Stimulus may be given to house physicians to take epidemiological as well as purely clinical histories, and to consider the social backgrounds of their patients in relation to other problems. Such topics as the indications for the use of anti-pneumococci serum and the importance of filling out case records properly are timely. The Connecticut Department of Health makes a valuable contribution to the education of pupil nurses through a course of public health lectures given upon request at nurses' training schools.

Legislation

Both hospitals and health organizations are concerned with legislative affairs and may be affected by the same regulations. Of the new public health legislation pertaining to hospitals in Connecticut in 1935 were four developments of special interest:

(a) An act concerning the prevention of blindness among infants, and requiring reports to the local health officer of "Inflammation of Eyes of Newborn" within 6 hours;

(b) An act concerning the prevention and treatment of cancer, and establishing a cancer program which involves cooperation of hospitals and the health department;

(c) An act concerning marriage licenses, which requires that a Wassermann or Kahn test be made of both man and woman before marriage;

(d) An act requiring that no hospital which receives appropriations made by the general assembly and which has facilities reasonably suitable for the treatment of venereal diseases shall refuse to admit for treatment any patient suffering from any such disease.

Correlation and Understanding

In view of the extent of the public health problems which concern the hospitals, and of the increasing opportunities for development of close relationships between the hospitals and health organizations, the need of mutual understanding of these joint problems and of resources to meet them is apparent. The value of some method to establish liaison should also be emphasized. Wherever possible, when health departments and voluntary health and welfare societies are engaged in cooperative activ-

[8]See The Interrelations of the Hospital Social Service Departments and the Community Health Association of Boston, Elizabeth Richards Day, 1928; and The Functions of Hospital Social Service. Amer. Assoc. of Hospital Social Workers, Monograph 1. 1930.

[9]What is an Adequate Health Program? Ira V. Hiscock. New England Journal of Medicine, Dec. 20, 1934.

[10]The Philosophy of Health Education in the Clinic, Iago Galdston, Hospital Social Service, XXIII: 24; 1931.

ities, a recognized hospital should be included in the liaison, if only to serve in a consulting capacity. Similarly, the presence of a well-trained public health executive on a hospital board or committee is helpful. In the development of a carefully planned, comprehensive program, a health council composed of representatives from the various community health organizations and the medical profession is a useful instrument for the purpose of directing correlations between hospitals and other health agencies.[11]

[11]Report on Hospital Councils, Their Functions and Organization, American Hospital Association Transactions, 1934.

Finally, in considering the broad general principles upon which a sound community health program should be based, we need to visualize the whole field of curative and preventive medicine. The distinction between prevention and cure can seldom be sharply drawn in the individual instance. Provision is necessary, through the work of private physicians, hospitals and dispensaries, official and non-official health agencies, for the furnishing to each individual in the community of the best attainable hygienic supervision and medical care, under economic conditions which will make their utilization easy of attainment.

Widening Horizons in the Public Health Service

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THE widening horizons in the public health service indicate a widening in vision rather than in accomplishment. This is intriguing. I do not think any public health man needs so much to widen his vision because it is already very much wider than the money he can get to put his dreams into effect. It is axiomatic in public health that we already possess far more knowledge than we have the means to put into practical application; and although there seems no good reason for it, I dare say it will always be so.

I think the strongest impression made upon me in my career in the Public Health Service has been the rather slow development of the public health movement—the lack of means to reach the goal we have set for ourselves. I take it as a sort of reflection upon our ability to "sell ourselves" to the public. The movement is comparatively young, it is true, but its significance to all seems to me to justify a greater speed in its progress.

The United States Public Health Service—Its Functions

This Service is a somewhat complicated organization, charged with a variety of responsibilities, which, in general terms, concern such things as the protection of the United States from the introduction of disease from without; the medical examination and inspection of all arriving aliens and prospective immigrants; the prevention of interstate spread of disease and the suppression of epidemics; cooperation with State and local health authorities in public health matters; investigation of the disease of man; the supervision and control of biologic products; public health education and dissemination of health information; the maintenance of marine hospitals and relief stations; the treatment of persons addicted to the use of narcotic drugs; and the providing of medical services in Federal prisons.

While the Public Health Service carries this varied responsibility, yet, as its name indicates, its prime responsibility involves its position as the National Health Agency.

In this field, it should be emphasized, the Service occupies a very definite position of its own. It does not duplicate the work of, or interfere with the activities of the state and local health agencies, whether they be official or otherwise. It occupies, however, a very strong position between state and local health organizations on the one side and international health agencies on the other. Indeed it is so placed that it may lend great assistance to other agencies and do much to stimulate public health activities of various kinds without in any way interfering with the prerogatives of others or with their fields of endeavor.

The Primary Responsibility in Public Health Work

It is a fixed policy of the Service, imbedded in law, that the primary responsibility in public health

work is with the states and the local communities, and the effort of the Service is to strengthen this field and stimulate the development of local health organizations. It cooperates, stimulates, advises or demonstrates, but does not interfere.

This brings me to the legislation recently passed which seems to be a matter of prime interest to this discussion. This legislation concerns the passage of the Social Security Bill and its relation to medical activities. This bill is now a law although the money to put it into immediate effect is as yet not available, and will not be perhaps for some months.

In the meantime the Public Health Service has made all preparation to put this legislation into effect so far as it concerns the Public Health Service.

Under this Act there is authorized an appropriation of $8,000,000 a year beginning with the fiscal year ending June 30, 1935, "For the purpose of assisting States, counties, health districts and other political sub-divisions of the States in establishing and maintaining adequate public health services, including the training of personnel for State and local health work."

The Act further provides that the Surgeon General after consultation with a conference of the State and territorial health authorities, shall prepare rules and regulations concerning the practical application of this law.

There is also appropriated for each fiscal year an additional sum of $2,000,000 for expenditure by the Public Health Service for investigation of disease and problems of sanitation, and for the pay and allowances and traveling expenses of personnel of the Public Health Service engaged in such investigation.

The recommendations to the Surgeon General from the state and territorial health officers, state: "It is the aim of the Economic Security Act, among other purposes, to stimulate a comprehensive, nation-wide program of public health, financially and technically aided by the Federal government, but supported, so far as possible, and administered, by States and local communities."

These recommendations outline in some detail the various features of this law—how it is to be administered; the distribution of funds; and the basis upon which such distribution is to be made. They also refer in some detail to the question of personnel, regarding standards, training, employment, etc.

There are other features of this Act which have some medical significance but not any relation to the Public Health Service.

It will be observed that the law does not contemplate in any sense whatever any form of general medical relief, which is the prime point of discussion at this meeting.

The Advantage to the Hospital Is an Indirect One

So far as is evident, the only possible advantage which may accrue to hospitals generally, under this program, will be an indirect one. Naturally improvement in public health administration and the maintenance of better sanitary conditions, ultimately reflects itself in hospitals by reduction in the number of sick persons to be cared for.

The Public Health Service can discuss this question of general medical relief with a good deal of sympathy because we, too, are charged with the operation of hospitals for medical relief, and we too have not much money with which to do it. We, too, have felt in our hospitals the added burdens thrown on all hospitals by the present economic depression.

Hospital Activities in the Public Health Service

We operate a system of hospitals, some 26 in number, with a bed capacity of approximately 5,000, which are engaged in furnishing medical relief to certain designated beneficiaries under the law. We are not therefore without experience in the operation of hospitals; and while our hospitals are perhaps more closely related to public health work than is the case in most hospitals, nevertheless, as I stated, we too have faced the problems of this period in a manner quite similar to that of other hospitals or hospital groups.

It is to be noted that in addition to this medical relief, we also furnish medical care and treatment to prisoners in all Federal prisons; we maintain an institution for lepers alone; we maintain a tuberculosis sanatorium; we maintain a hospital at Ellis Island for the examination of immigrants; and recently we have opened an institution for the treatment and study of drug addiction. These, of course, are much more closely related to public health and not so much related purely to the domain of medical relief.

In our Marine Hospitals during this present depression, in spite of lack of money, we have, nevertheless, much liberalized our regulations with a consequent sharp increase in the number of admissions; and we have had to take care of a large number of employees of the National Government under the new administrative agencies, which have in the last two or three years been set up for various purposes. You can see, therefore, that we have had our burden to carry, which is quite similar to yours, and also on limited funds.

The Trend of the Modern Public Health Movement

In such a discussion as this, it is almost impossible to avoid comment on the trend of the modern public health movement, which, as you are well aware, has

produced some conflict between the clinician and the sanitarian.

You will recall that the public health movement, after Pasteur's notable discoveries and the consequent establishment of the modern science of bacteriology, in recent years, passed into a stage of its existence when its chief effort was devoted to the control of communicable disease. In this field it has achieved notable success.

Still more recently, sanitarians began to realize that while there had been a decided reduction in morbidity and mortality from communicable diseases, yet certain other disease showed no such reduction, and to meet this problem required a shift in the point of attack.

For example, the degenerative diseases of advancing life, cancer, cardiac and vascular disorders, as well as certain respiratory affections, have shown no reduction either in morbidity or mortality. Indeed quite the contrary.

In facing this new phase of the problem, sanitarians have fully realized that to meet the issue requires the development of a program somewhat different from that previously employed. This program leads back to the clinician. The emphasis, therefore, in the modern public health movement, must, of necessity, be placed upon the individual, and it is the clinician who holds the key position.

You will recall also that with the specialization which has taken place in modern medicine, it was for a time assumed, somewhat tacitly perhaps, that the sanitarian occupied his particular field and the clinician his, and that there existed between these two departments of medicine no very essential relationship. This separation of curative and preventive medicine we now know is an error. We are becoming more and more convinced of the unity of medicine and more and more satisfied that if we are to achieve desired results, all departments of medicine must cooperate to the one end, which is the prevention of disease and the promotion of health. The separation between curative and preventive medicine is sound neither in theory nor in practice.

This, as you well know, in recent years, has produced a situation which is by no means easy of solution; and which has given at times cause for grave anxiety to the entire medical profession.

There are, of course, two sides to the question. Nevertheless, with due regard to all the difficulties of clinical medicine, there is an unanimity on the part of thoughtful sanitarians that the general medical profession has not always participated as actively in public health matters as it might have done. Undoubtedly, there has been some encroachment on the field of the clinician by the sanitarian. On the other hand, there has been a lack of sympathy on the part of the clinician with the efforts of the sanitarian. The program of the new public health envisages these two great forces of medicine as working together for a common purpose.

Unless the present disturbed conditions should expedite results, or radically change the organization of the medical profession, then this situation will continue to face us. And it will require the best thought and the best effort of all of us to make the necessary adjustments to meet it.

Medical Relief in the Public Health Program

I say all of this simply for the purpose of pointing out that medical relief as such has not as a rule been a part of the public health program. You may look over the charts of many health organizations and you will find no allowance made in the budgets purely for medical relief. What medical relief has come under public health programs has concerned communicable diseases; and, of course, this type of medical relief is rendered solely for the purpose of preventing the spread of such diseases.

If it is expected that the expenditure of funds under the Social Security Legislation would in any way directly help the problem of medical relief, then it is at this point, it seems to me, that the view of the sanitarian diverges from that of the clinician and hospital administrator.

I am in no sense seeking to draw fine distinctions or to make petty criticisms. I think it is well to point out, however, that whereas the modern public health movement has produced at times uncomfortable relationships between the sanitarian and the clinician, it is now a matter of some surprise to find a group which includes clinicians and hospital administrators displaying a keen interest in funds appropriated for public health work. If we sanitarians only had the money, how gladly would we accept this as an invitation to share your burdens!

Both you and I might readily agree that the provision of medical relief, at least for certain groups, may ultimately become a part of the responsibility of health departments. Sir Leslie MacKenzie in discussing this problem and speaking of the fact that hospitalization of communicable diseases is a part of any public health program, while the general medical relief is not, says: "Every disabled person, unless he is to be shot out of hand, is a drain on the efficiency of every community. It is not, therefore, now a question of principle whether the disabled person shall be provided for, it is entirely a question of *how*," and he intimates that this medical relief should be furnished by the public health organization.

Of course, these problems concern very intimately all social service and welfare organizations because in their fields the social and economic aspects of sickness become very sharply emphasized. I assure

you that they are reflected in our own social service work in our hospitals in just the same manner in which you meet them. And, in addition, these departments of our hospitals work under difficulties which are inherent in a situation controlled by law and regulation.

I repeat that I am not attempting to make fine distinctions, and I am quite willing to have adjustments made and cooperation promoted in every way possible. I frankly admit that public health in general is so pervasive that it may include almost any human activity, yet under present methods of organization and administration, the question of medical relief is not regarded as a public health responsibility.

It should not be forgotten that indirectly the public health movement contributes to the solution of this problem by the prevention of disease, and thereby relieves to an extent the burden which falls upon the hospital.

Of course, the sanitarian often faces problems which are much more economical than medical; and where he knows that the expenditure of large sums of money would be directly reflected in striking reductions in both mortality and morbidity. At the present time the Public Health Service is expending a good deal of money in cooperation with the states in the prevention of malaria and in rural sanitation. The results of these expenditures will ultimately show themselves without doubt in the reduction of sickness and therefore in the reduction of the responsibility of the hospital, but this will be indirect.

Is it too much for me to suggest that it all lies in a different point of view, and the present economic depression somewhat confuses the clarity of our vision and disturbs our judgment? For example, the hospital may complain bitterly that it has to take care of a few cases of typhoid fever. Yet, you all know that had it not been for the sanitarian's work the hospital would today be caring for ten or twenty times as many cases of typhoid fever. This is where the indirect effects of public health should be felt, but due to the fact that it is in negative form, it is often overlooked and forgotten.

In the face of a real and practical problem, this sort of discussion may appear futile, yet the settlement of such matters may help us to a solution of our difficulty.

Medical relief, under present conditions, seems to lie in the marginal zone between such agencies as social and welfare organizations, and clinical and sanitary medicine; and its present position is proving to be uncomfortable. In the consciousness of rights and privileges among traditional groups, is there not danger of losing the consciousness of mutual responsibilities and common interest? Is it not perhaps on the part of each group just a question of not loving Caesar less but Rome more?

Our own Surgeon General, Dr. Cumming, in a recent thoughtful address has made many illuminating comments on the present situation with regard to the relation between the clinician and the sanitarian. I quote from him rather freely. He says: "In accordance with the times, there are signs that the pattern of medical practice, the program of public health, and the public's interest in medical care and health may change considerably. We move, sometimes slowly, sometimes fast, but we move." Also: "Inevitably, therefore, the boundary lines between the domain of the private practitioner of medicine and of the public health agency are being obliterated. They will be obliterated, in my opinion, to a greater extent in the future." He further says: "I think that all of the discussion that has been going on for the last few years regarding the relationship of the medical profession to public health, and the part which the medical profession might play in a greater application of the science and art of medicine in our population, is befogged by issues which are really trivial in importance when compared with the common goal of public health and medicine."

All of which is an invitation to cooperation that we may go on our way together with a united front. Cooperation does wonderful things. If I may use biblical phraseology, it is "an ornament of grace unto thy head, and chains about thy neck."

The Hospital Superintendent Isn't Worried

One of the cardinal virtues of a hospital administrator is his perennial optimism when things seem to be at their worst—he is inclined to feel like the friend of Frank L. Stanton did in the midst of his troubles:

His hoss went dead an' his mule went lame;
He lost six cows in a poker game;
A harricane came on a summer's day,
An' carried the house whar' he lived away.
Then a airthquake come when that wuz gone,
An' swallowed the lan' that the house stood on!
An' the tax collector, he come roun'
An' charged him up fer the hole in the groun',
An' the city marshal—he come in view,
An' said he wanted his street tax, too!
Did he moan an' sigh? Did he set an' cry
An' cuss the harricane sweepin' by?
Did he grieve that his ol' friends failed to call
When the airthquake come an' swallered all?
Never a word o' blame he said,
With all them troubles on top his head.
Not him. . . . He climb to the top o' the hill
Whar' standin' room wuz left him still,
An' baring his head, here's what he said,
"I reckon it's time to git up an' git;
But, Lord, I hain't had the measles yit!"

The Hospital and the Changing Social Order

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WITHIN the last two decades, or thereabouts, hospitals have undergone notable changes. Twenty-two or three years ago the hospital situation was very different from what it is today. The American Hospital Association, though organized as early as 1899, was not yet firm on its feet. It could not boast of permanent headquarters, much less of a full-time executive staff. The Catholic Hospital Association and the Protestant Hospital Association did not exist, and the first state hospital association did not come into being until some time later, when Ohio took the lead in this direction.

The number of veterans' hospitals was practically nil, and the county hospitals were not as numerous or as attractive as they are at this time. There were about two-thirds as many hospitals in the country as there are now, and about one-half as many beds.

The capital investment in hospital buildings at that period was probably a little less than one billion dollars, in contrast with an investment of four billions today.

Organized fund-raising projects for hospital benefits were unknown, and publicity concerned with hospitals or the care of the sick was considered unethical.

The health insurance program had just been initiated into England by David Lloyd George, but such a venture did not mean much to America; she was still enjoying peace and plenty; the man of moderate means was not yet recognized as a social problem; hence the "forgotten man" was a stranger to her.

Hospital literature was very limited in the early 1900's, and what was available was not of a type to interest hospital administrators sufficiently to make them want to find out what was taking place in their own field of endeavor.

Each hospital seemed to be a law unto itself; it lived its own life; it set up its own standards; it settled its own difficulties; and it served its own community. It was satisfied with the results of its own work and the way it was doing it.

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The Evolution of the Hospital

The evolution of the hospital has worked in cycles. It has had dark ages and golden ages, and dark ages again, but when in 1913 the American College of Surgeons was organized, and when five years later, in 1918, it projected its standardization program into the hospital field, a new cycle for hospitalization began that will eventually go down into history as the hospital betterment period.

The Minimum Standard became a veritable constitution for hospitals, and standardization, reconstruction, and reorganization became the pervading purpose of the day.

Disturbing though the element of standardization was to a good number of hospitals, and even though it was no smooth or easy climb to reach the ideals it set forth, nevertheless its influence became so extensive and widespread as to play a very integral part in the life of the community and to make the hospital a place in which to get well and learn to live, rather than as Browning once styled it, "a good house in which to die."

It was thought that the pinnacle of hospital evolution had been reached when the first list of approved hospitals had been published and our local papers proudly announced to the public the standings of the hospitals in their vicinity. But the summit of hospital administration was not so near; its peak seems to be somewhere in the sky. The nearer we think we are to it, the farther away it appears to be.

A working program toward meeting the Minimum Standard had no sooner been set up in the hospital and begun to show results, when in 1929 the dark cloud of depression loomed up on the horizon of our country and eventually broke into a storm that laid waste many of its finest institutions, among them many of the voluntary hospitals. The clutches of social, economic, and financial difficulties following in the wake of depression have almost strangled the privately owned hospitals. The Ameri-

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ican Hospital Association reported that during the year 1931 the voluntary hospital suffered a net loss in the number of its institutions amounting to 110, with a net decrease in its bed capacity of 3,401. It also showed that with less than 35 per cent of the total hospital beds of this country, the voluntary hospital took care of 75 per cent of all the patients admitted to hospitals during the year 1931. The year 1934 saw 103 voluntary hospitals close their doors for lack of funds. These, with a number of others that were forced out of existence since 1929, make a total of 418 voluntary hospitals, representing approximately 20,000 beds, withdrawn from use, while at the present time there are studies available to show that 45 per cent of the three thousand counties in the United States have no hospital service for general community use. Recommendations have also been made and approved by the Committee on Economic Security that funds for the construction of needed hospitals be provided as part of the Public Works Program. Is there not a lack of vision somewhere? How can our government, in full knowledge that our voluntary hospitals are operating with a 50 per cent bed occupancy, think of erecting more government hospitals at the taxpayers' expense when, if a fraction of the sum that will be used for that purpose were made available to existing private institutions they could carry on and serve the patients needing hospital care? Of the billions of dollars already spent to improve the health condition of the Nation, and the further staggering sums to be poured out by the government for that purpose, not a dollar has been given to help the voluntary hospital.

Hospitals as Charitable Institutions

The public accepts hospitals as charitable institutions, trusting to Divine Providence and a generous philanthropy to provide the resources for their efficient operation. In spite of important reductions in operating disbursements and with the greatest economy in hospital expenditure that good care of the patient will permit, hospitals are faced with large deficits. Incomes from patients have dropped 30 per cent in the past three years, while volumes of free service have risen from 15 per cent of the total in 1929 to 60 per cent in 1934, and 70 per cent of all patients in charity clinics are being treated free of charge. In the meantime, federal and state legislation, through processing taxes and other revenue measures, have increased the cost of food and other staple commodities approximately 20 per cent.

When a bank sees its deposits decrease and its cost of operation closely approaching its earnings, it pays off its depositors, retires its stock, and goes out of business. When a private business enterprise finds it cannot longer operate with a balanced budget, it liquidates its assets and retires from the business field. Some business men will say that any institution that is not self-supporting should go out of business, but the hospital cannot do this, if it is a good hospital. Its obligation to its community is not measured by its net earnings, but by the service it renders, regardless of whether the community pays for such service or not.

To quote from a paper by Dr. Stephens, superintendent of the Winnipeg General Hospital, published in *Modern Hospital*, October, 1933:

"The lay mind, inexperienced in hospital management, sees in its administration the ordinary rules applicable to big business. Consolidation, mergers, lowered overhead, and centralization are terms that have been bandied backward and forward during recent years, though seldom heard at present. Some of these proposals are sound and have been resisted by the hospital authorities too long. Many of them are not sound, for there are certain factors in which hospital administration differs entirely from ordinary business. Hospital executives are dealing with a group of individual patients and their individual needs; they are dealing with a group of individual physicians, each with his individual ideas; there are some non-productive departments that must be carried on. None of these factors can be adjudged on purely business standards. Hospital administrators can budget expenditures, but it has been sadly found out in the past few years few of them can accurately budget revenues."

There is no greater factor in the equation of human relief than the hospitals. Their contribution to charity in dollar values, counts more than the contribution from any similar source.

It would go far toward reducing the cost of medical care to the people in the lower brackets of wage earners if the voluntary hospitals could be sure of direct subsidies from government agencies in proportion to the volume of service they render to approximately 2,000,000 indigent patients annually.

Another problem confronting the voluntary hospital at this time is unfair competition, not so much among themselves as with tax-supported hospitals. I say "unfair" in view of the fact that there is a perceptible tendency to freer admissions to pay patients and part-pay patients when suitable private facilities are available in the same community. If you wish further information on this subject, I invite you to read the report of a study made in 1933 by Dr. C. W. Munger and Mr. Carl P. Wright in the October number of *Modern Hospital* for the same year; also "Policies of Local Governments with Regards to Hospitals," *Modern Hospital*, Au-

gust, 1935, which is an abstract of a report on Community Relations and Administrative Practice of The American Hospital Association in cooperation with the Bureau of Medical Economies of the American Medical Association. Perhaps many of you are already familiar with the figures presented in those studies and the reactions of the superintendents of the hospitals that took part in them.

The rapidly changing social order has also thrown the hospital into competition with business and industry. Where the appetites of the people are whetted for commodities and services that contribute to enjoyment and leisure, and where salesmen are using every device known to man to put these things over and create a market for them, notwithstanding that the cost of living far exceeds the purchasing power of the average individual, and where this has little or no influence on his capacity for wanting things regardless of his ability to pay for them, what chance, I ask you, in the world's mart of today has such a joy-killing product as provision for hospital care during illness? Nevertheless, there are many groups at this time who are interested in reminding the man of moderate means of the risks to economic security arising out of ill health and suggesting ways and means by which he may receive good medical care and pay for it; consequently, there is much noised abroad about health insurance, hospital insurance, periodic payment plans, deferred payment plans, medical service bureaus, and many other plans all having more or less the same objectives: making medical care available to the eighty per cent of the people in this country that the Committee on the Cost of Medical Care discovered in need of it and unable to pay for it, as well as offering a partial solution for the financial problems of the medical profession and the voluntary hospitals.

There are a number of hospital executives, however, still in a maze as to which of these suggestions to accept. The Julius Rosenwald Foundation supports group hospitalization that covers hospital charges only and does not in any way interfere with the arrangement of professional fees between physician and patient. The Milbank Memorial Fund advocates health insurance, compulsory for certain classes, paying physician's fees as well as hospital charges. The American Medical Association tolerates the medical service bureau, but it seems to still refuse whole-hearted approval of any of these devices. Something must be done, however. Money must come from somewhere. Hospital patients continually clamor not only for lower rates but they expect more for their dollars than ever before. Experience has taught us that great needs that are neglected by private enterprises are eventually taken over by the government in response to public demand. The time is ripe right now for action. We must adopt some sort of a pay-as-you-go program that will enable as many individuals as possible to finance their own care, and we must see to it that the plan of our choice be workable.

The hospital in this country is passing through a profound and significant change, a change that is generating new ideas, creating new methods, and forming new conceptions of our present social responsibility. The hospital has always been sensitive to the social, historical, and economic trends of the times, and it is still ready and willing to do its share in making its scientific investment useful to those who need it at a price that is reasonable, where this can be done without endangering its stability. There is no question as to the veracity of the statement recently made by Ex-Governor Smith in reference to the place of the voluntary hospital in the city of New York. "The voluntary hospital system," said Mr. Smith, "must be preserved, because the closing of these hospitals would place upon the city a burden that it could not carry." Could not the same statement be applied to the entire country?

Under pressure of necessity the hospital has practiced every possible kind of economy. New and much needed equipment has been denied, maintenance and repairs have been deferred, salaries have been lowered, and extra duties have been placed upon generous workers, but beyond a certain point a hospital cannot go. It is a human institution and its first interest must be to give good care to the patient at any cost.

Public Information and the Hospital

The public is misinformed concerning the hospital. Were one to heed the cries of false prophets, one would be led to believe that the hospital is a profit-making institution. The "exorbitant hospital charges" form the theme of numerous magazine articles, the topics of papers and discussions of most health organizations, and the subject of conversation of a multitude of people who have need of hospital care. Perhaps hospital administrators themselves are in a way more or less responsible for this gossip. Many of them do not make their agreements clear with the patient or with those who are responsible for him when he enters the hospital. "Make your agreements clear" is the slogan of Dr. Richard Cabot. Patients want private rooms when they sometimes cannot pay for ward space. They want special nurses and radios, they need laboratory service, X-ray work, and physical therapy, all of which they take without any conception of the cost of these things, and when they are discharged and presented with their bill, is it any wonder that they

are astounded at the dimensions of it? They were not told when they entered that there would be any special charges other than what would be incorporated in the room rate. They do not understand extra charges. It is too late to try to adjust the matter when the patient's tranquillity of mind is disturbed and he can do no clear thinking. Explanation will be of no avail. He will leave the hospital a dissatisfied patient. To be sure, the extras are heavy in most hospitals. It would be better if they could be eliminated, but while many attempts have been made in that direction, most of them have failed to serve the purpose. If the doctors could be prevailed upon to order only what is necessary—but who of us can do that?

As a matter of fact, hospital prices are not "exorbitant" when one considers that the public will cheerfully pay the price at a hotel for a room, and in addition pay for every extra service rendered, however small, while in the hospital the patient receives in addition to his room, three meals a day and nourishment in between; if desired, general nursing care, and the services of the resident staff, as well as those of orderlies and maids, who are not looking for tips, and in many hospitals he is also given ordinary medications and a good amount of dressings, and all for the price that he would pay for a room in a hotel. But the average man resents illness and everything connected with it. He has made no provision to pay for illness; it is a gloomy subject and he does not want to think about it. It is little use to criticize the public, however; it is better to educate it by building up its confidence in the hospital, by showing how the hospital was conceived and developed by far-seeing individuals in order that lives of human beings might be made safer, longer, happier.

If the hospital of today is to have the good-will of the people, it must reach out to the community and make its service available under every possible circumstance. It is very evident, however, that the financial problem will be the pressing problem of the voluntary hospital for many years, and that some form of insurance will need to be provided to help pay for the cost of illness. It is only by this method, coupled with efficient management, that the financial future of the worthy hospital will be assured.

Value of Psychology in the Rural Hospital

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I KNOW THAT you all will wonder what Emily Post could say that would refer to a Southern rural hospital. It is true that she did not refer to a hospital, but she did say "The attributes of a great lady may still be found in the rule of the four S's—sincerity, simplicity, sympathy and serenity."

This rule is heavily taxed in the care of patients in this class hospital. An understanding is demanded that is paradoxically simple and complex. A nurse from a large civic institution, placed in our hospital, would find herself confronted with a problem dealing in personalities, whose unyielding demands would make her helpless in adhering to her system of professional ethics.

We require our nurses to have a theoretical course in the principles of psychology and application in the nursing field so that she will better understand the individual needs of the patients in this vicinity. While it is true that the majority of our nurses are Southern born and from small towns and possess a native understanding and experience, she has to be taught to apply this understanding, thereby gaining a much desired insight into the behavior of her patients. This course gives her a self-knowledge that has an end point of control and poise. She develops a sincere and sympathetic comprehension that is simple and serene. She makes each patient an individual experiment in adapting her psychology. She is more tolerant, considerate and skillful.

In our patients we have four definite classifications—the local patient, the farmer, the tenant farmer, and, last but not least, the negro.

The overalled farmer, long on knowledge of cotton and short on knowledge of hospitals, is to be reckoned with—for he is the mainstay of the South and her institutions. We must handle him with gloved hand and understand his eccentricities. The tenant farmer, poorly educated, no experience in a community, except with his kith and kin, is demanding of a special approach and sympathy. Last, the

negro, trusting in us explicitly and childlike in his wonderment and helplessness. The farmer understands his group; the tenant farmer understands his group; the negro understands the negro—but the Southern nurse must understand them all if chaos is not to result from her efforts to be helpful.

The Local Patient

The majority of our patients are local, small-town people of an average intelligence that would be found most anywhere; they are our social friends outside the hospital. In spite of the fact that they are from a group with moderate advantages and common sense, the small-town perverts this common sense in their relations with the hospital. They are factiously loyal to the hospital of their choice and ready to practice the pettiest jealousies in absorbing the hospital to themselves personally. This complex in our "best patients" presents a very definite problem to the nurse and one where psychology is given a scope of application.

The nurse must be taught to tactfully maintain neutral ground in outside jealousies, without seeming unappreciative of the patient's preferred loyalty. She explains kindly that hospitals have different methods, one as good as the other, to attain desired ends.

The neurotic local patient, whose repeated demands for attention are a source of worry and perplexity to the nurse, is helped by the subtle influence of the properly trained nurse in psychiatric education.

The sum of the situation is like unto the advertisement with which all Americans are more or less familiar—"That Personal Touch"—requiring patience and tact in confirming the patient's convictions as to why he or she patronizes this particular hospital without, in any way, lowering the standards of efficient hospitalization.

The Farmer

Due to his isolation on the farm, the farmer knows very little of the workings of a hospital. In his mind it is a "House of Death" and patronized only as a last resort. He waits too long on hospitalization for his sick. The appendix is usually ruptured; a serious infection has set in after childbirth, and a patient has many convulsions before the hospital is taken into account. This contributes to a high mortality among this group of patients.

When a farmer takes a patient to the hospital, he brings along all his relatives and friends; they expect to stay days and often bring picnic lunches so that no time will be wasted away from the patient. The majority are hostile and skeptical of every move the nurse and doctor make. It takes tact and much explaining to keep them out of the sick room, where they, literally, hover over the patient with ill-concealed concern.

Each case must be treated individually as to how many, who and when to let the visitors in the room. The nurse, in many instances, leads them into an intelligent cooperation for the welfare of the patient. A blanket rule of treatment for these patients cannot be maintained. By no means are their feelings to be hurt, for they will have a host of relatives and friends whose patronage will be determined by one visit.

The Tenant Farmer

The tenant farmer presents, practically, the same psychological problems as the farmer, except from lack of education he is much more difficult to deal with. Both the patient and his people will, apparently, accept more and conceal their feelings. This is a surface acceptance and cooperation; they are actually watching the smallest procedure. There is suppressed fear and uneasiness that make the mental comfort of this patient a task. It takes care and persistence, that is meritorious in the nurse, to dissipate these fears. If a case should climax in death, these people lose all emotional control and, as a result of suppressed fear maintained through the illness, prolonged weeping and wailing set in without consideration as to where they might be; they often attribute their misfortune to the doctors and nurses without rhyme or reason and look on the medical profession as "mystery workers."

The Negro

Stars truly fell on Alabama when it comes to treating her superstitious, ill negro. His pre-hospital treatment may have been a tar pack, a basin of water placed under the bed to stop the night sweats, a concoction of something he has brewed or a copper cent placed on the spot of his greatest "misery." Most of them object to baths during illness and are brought to the hospital in a condition that is malodorous, to say the least.

We have an Alabama law that a white nurse cannot attend a negro patient in her institutions. This does not mean that the white nurse is too good, too clean, or is lowering herself to menially wait on the negro.

There is a social barrier that is agreed to by both the negro and the white which must exist for the white woman's protection and the negro's comfort. There is a psychological advantage in this: the negro nurse is a most apt student of psychology, and, understanding her race, she uses this knowledge, with a result that they receive a mental comfort that the white nurse could only strive for and not attain. We cannot change the social barriers that have been placed on us through the years. We

want to do the most for them that we can under conditions that have been made for us.

The negro is a noncommittal, appreciative patient. It requires tact and understanding of the vernacular of the negro to obtain a history of his illness. It takes a special comprehension of his psychology to make him comfortable and gain cooperation, but his confidence and cooperation once gained, he gives a much more definite history than the average white patient.

We have at Frasier-Ellis Hospital three large negro wards with two negro graduate and two student nurses; they have the same educational advantages as the white nurse. We find the negro girl makes a good nurse and is intelligent in handling her colored patients; she is an effective instrument in teaching hygiene and bringing sick colored patients to the care of a reputable physician. It is with pride we recognize the success attained by some of our negro nurses.

Objectives in Teaching Psychology in the Rural Hospital

1. Comfort of the patient; this is undisputed, that the patient is made more comfortable and his attitude toward those who help him is influenced.
2. Educational; the nurse is an important influence in giving instruction through conversation, explanation and her actions. This may be individual, but reaches to a better community health. She may be assured of being referred to as an authority when cases of treatment terminate successfully.
3. Follow-up work; the nurse is often given an excellent opportunity to follow up rehabilitation, both mental and physical. This makes her work particularly interesting and serves as a satisfying demonstration of her classroom study on behavior.
4. She is an aid to relief workers and obtains the complete psychological picture of her patients in and out of the hospital.
5. Personal understanding; she gains an insight of her own mental make-up and has better control over her emotions. She is less subject to hysteria and nervous disorders when she has had an organized course in the study of psychology.

I wish I had the time to give you case-studies, colorful and often humorous, but always interesting, whose treatment from a psychological standpoint has proven, beyond a doubt, that we did a wise thing to give our nurses the advantage of this particular training.

In conclusion, it is not intended to picture a financially poor and ignorant South, but to present our problem cases as typical of our section and how we are facing them. We feel, with variations and proper flexibility, they may be applicable to any section of the country.

What Knowledge of Social Science Does the Hospital Executive Need?

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THIS ARTICLE is devoted to a brief discussion of the social sciences as they relate to hospital and clinic service. Our aim is to indicate the significance of these fields to the hospital, and to furnish for ready use selected bibliographical references for collateral reading.

What Are the Social Sciences?

The social sciences deal with anything that concerns society and the individuals in it—their origin and environment, health and illness, work and unemployment, earnings and standards of living, education and family life, wealth and poverty, religion and prejudices, security and fears, generation and migration.

In general the social sciences form the basis of any study of society's complex human relationships, activities, and institutions. They aim at an understanding of the well-being and the ill-being of society, and when understood, in so far as it lies within human comprehension, some branches of these sciences indicate effective ways to deal with social problems.

Dr. Seligman[1] defines the social sciences "as those mental or cultural sciences which deal with the activities of the individual as a member of a group." He contrasts them with the natural sciences that "have to deal with phenomena of the universe." He divides them into three classes:

(a) The purely social sciences which consist of:

[1]Seligman, Edwin R., The Encyclopedia of the Social Sciences, Vol. 1, pp. 73-77.

politics, economics, history, jurisprudence, anthropology, penology, and sociology;

(b) The semi-social sciences which consist of: ethics, education, philosophy, and psychology;

(c) The sciences with social implications which consist of: biology, geography, medicine, linguistics, and art.

The eight disciplines generally regarded and often referred to as the social sciences, or as sciences with distinct social implications are: anthropology, biology, economics, history, philosophy, political science, psychology, and sociology.

Why Do the Social Sciences Concern the Hospital?

Among the forces and conditions that bring about social problems, such as dependency and poverty, unemployment and unemployables, child labor, wrecked family life, parent-child relationship difficulties, crime, alcoholism and drug addiction, which singly, or in any combination, create ill-being of the individual, ill health stands out as an important factor. Is that statement correct? Or is it difficult to determine which is the cause and which is the end-product? While there is sufficient evidence that ill health causes some of society's social problems entirely or in part, is there not equally sufficient evidence that the existence of social problems causes ill health and hinders its cure? In any event, it is important that hospital executives be students of society, just as the sociologists study health and disease.

The executive, department heads, and other important hospital workers should know much of man and his life. Some knowledge is acquired by experience—by trial and error. Facing human problems over a period of years, and attempting to understand and meet them, teach life and man's behavior characteristics. But life is not simple. Man is a complex organism, living in a complex environment and drifting in many directions.

Hospital executives in their daily performances are obliged to draw upon a variety of knowledge—not the least of which are the basic principles of the social sciences. Biological, economic and social forces give rise to existing maladjustment, which requires a sympathetic understanding of the neighborhood and of its people—the native and foreign-born—the backgrounds from which sick people come, their past and present environment and standards of living, customs and habits, education and ignorance, religious beliefs and superstitions, ideals and conflicts, prejudices and strange attitudes. With such knowledge at one's command, it becomes less difficult to understand the social problems affecting individuals, and to evaluate recommendations submitted by social and other hospital workers engaged in the admission, rate-adjustment, transfer and discharge, and social adjustment of patients.

Also, such knowledge helps to understand the aims and activities of other social agencies—voluntary and governmental—in the field. Sound community thinking and planning require intimate cooperation and effective coordination of organized groups, especially those closely related to the hospital, such as Visiting Nurses' Association, Red Cross, Board of Health, Municipal Hospitals, State and City Welfare Departments, Travelers' Aid, Child Welfare, Mental Hygiene, Tuberculosis, Cardiac, Venereal, Diabetic, Central Chests and Federations. On the strength of the knowledge of the social sciences one can, with some assurance of expertness and promise of constructiveness, participate in the deliberations and considerations of matters concerning community social planning.

Dr. Karpf[2], in discussing the necessary equipment for social work according to the literature he surveyed, enumerates:

Knowledge of "backgrounds";
A philosophy of life—a "point of view" (a social philosophy);
Knowledge of human nature;
Knowledge of norms;
Clarity and accuracy of thought;
Private and public community resources.

Would that not be equally essential equipment for hospital executives?

The Broadening Concept of Hospital Service

What are the goals that the hospital has set before it? And to what extent do social processes retard or facilitate their attainment? The traditional and commendable goal of healing the sick requires no comment. Of equal importance, however, are the character and quality of the hospital's conception of the social problems surrounding and affecting the patient, its interest in his social and economic status, the extent of its concern in the fate of the discharged patient, and, especially in the case of a breadwinner, in the fate of the patient's family during and after illness.

In other words, the hospital has the added responsibility of sharing in the community's efforts to lessen social degeneration. Its achievements in that direction are no better than its understanding of and active participation in the community's welfare, and above all, its own conception of the possibilities of service. An understanding of the community and the individuals in it broadens the hospital concept and weaves it more effectively into the fabric of community life, needs, and responsibilities.

The ever-flowing stream of new experiences—research and teaching, the more intimate study of

[2]Karpf, M. J., The Scientific Basis of Social Work, p. 27, Columbia University Press, N. Y., 1931.

architectural values in hospital planning, precision instruments, asepsis, surgery, anesthesia, X-ray, laboratory, physical therapy and dietetics—have unquestionably augmented hospital service. But what is broadening the hospital concept at a greater speed than is being realized are the social processes and the emphasis on disease prevention, of the past quarter of a century. This unending state of modification is transforming the hospital into a complete community health center.

It is becoming complete in that it attempts to embrace all known phases of health service, and it is a community health center in that it is the product of communal, social, and medical thinking and planning—satisfying the special needs of the community.

It is probably fortunate that this change is not apparent to, or admitted by, some hospital executive, for if they recognized it they might be moved, for some unexplained reason, to oppose it and to exert efforts to hinder its influence upon the hospital; that would be a pity and energy misspent. The social processes achieve, at least in part, a betterment of society, that is not without its advantage to the hospital. The public health achievements require no defense.

Social Processes and Social Problems Affecting the Hospital

Society does not stand still. Its complex network of social processes represents society's living, thinking, activity, and growth, stirred by continued "movement, change and flux." Social processes make society not a fixed product, but a changing organism—always moving on from what it has been to what we comprehend it to be today, to what it will be tomorrow. Social processes are activated by social forces, which in their path carry achievements and failures. The former are welcomed as social progress; the latter are recognized as social problems. Bossard[3] must have had that in mind when he wrote: "In the everyday experience of society, and at any given time, certain ways of living come to be considered as essential to its well-being. Thus to live is considered as normal, occasioning no thought or word of comment; to exceed these levels is a matter of pride and satisfaction; for any considerable number of persons to fall below them becomes sooner or later a matter of social concern." He comprehensively defines social problems as consisting of: "social situations, which are a product of group life, involving a substantial number of persons, characterized as constituting a threat to social well-being, as defined by the mores of the group, and which must be dealt with in an organized and concerted way."

What are some of the more frequent and current social problems? Although closely related and difficult to separate, they may be conveniently divided into three groups:

(a) General social problems affecting the people at large and the people's institutions, among which the hospital is included, such as:

Poverty and dependency (earnings and living costs, standards of living, the aged, orphans, paupers, homeless).

Broken homes (divorce, desertion, widowhood).

Housing (slums and tenements)—(poor housing conditions increase the number of hospital patients because not even minor illnesses can be cared for at home).

Unemployment and unemployables.

Crime and delinquency (criminals, jails, prostitution, abortion, commercial vice, alcoholism, drug addiction, woman and child labor.

Industrial and occupational hazards (workmen's compensation).

Population growth and movement (miscarriage, still-births, birth control, eugenics, racial, religious and national groups and conflicts)—(immigation and emigration, regional shifts in population).

Democracy, fascism, socialism and communism.

Capital and Labor (wealth, unions, wages, hours and conditions of work and other personal practices, strikes).

Peace and War.

Social Legislation.

(b) Special social problems affecting medicine, and its practitioners, which in turn also affect hospitals:

Costs of medical care.

Economic burdens of physicians.

Contract practice.

Specialization and the family physician.

Health insurance.

Periodic health examination.

Socialization of medicine.

Ethics (fee division); cults and quacks.

Medical education in so far as it should include the social sciences.

Legislation affecting medicine and hospitals.

Hygiene and sanitation.

Social hygiene with especial reference to sex matters and morals and the control of venereal disease.

(c) Specific social problems affecting hospitals directly and not necessarily exclusively:

The problem of illness in so far as it requires institutional or clinic service—acute, chronic, and the physically handicapped, such as the blind, crippled, deaf, dumb, cardiacs, and the infected with venereal diseases.

Bed capacity and distribution of hospitals to meet demands—zoning.

Service in the wards and out-patient departments; eligibility—wards, free clinic, pay clinic, consultation clinic.

Ambulance service.

[3]Bossard, J. H. S., Social Change and Social Problems, pp. 1-3, Harper & Bros., 1934.

Voluntary support (chests, foundations, contributions).

Governmental support—Federal, State, County, Municipal.

Government control versus private control of voluntary hospitals.

The deficit—income and expenditures, bed utilization, endowments, financing the hospital.

Rates and charges—according to ability to pay.

Group hospital service.

These multiform social problems of the community come and go, and periodically fluctuate in severity, leaving in their course social maladjustment of individuals and of groups, with their concomitant effects on institutions. They bring to a realization that serious stirrings are afoot, warning of imminent social and economic consequences. The hospital is not outside the tempest area. Under such circumstances it is evident that hospital activity, in any one of its phases, or as a whole, cannot be detached from community life. As the hospital is affected by social unrest, it is at the same time one of the important institutions that is called upon to contribute toward its adjustment.

Beside the understanding of the major social problems, their origin and effect, the hospital learns from the social sciences that the treatment of disease should not eclipse the fact that a diseased man is involved. Beneath the surface of diagnosis, treatment, and prognosis of illness, are social implications of vital importance. For example:

Prophylactic administration of silver nitrate to the eyes of the newborn is, of course, for the immediate purpose of preventing blindness as a result of gonorrheal infection. The practice, however, is a distinct case of the prevention of a serious social problem—that of blindness.

Corrective surgery for deformities achieves more than normal alignment of bones and action of joints—it reduces the number of cripples and returns many to gainful occupation.

Occupational therapy in chronic, tuberculous, and orthopedic hospitals has to its credit a more fundamental end-product than "killing time" during protracted hospital stay—it makes it easier for the cured to obtain work for which they have been suitably trained and thus helps to lessen the social problem of their vocation and employment.

Prenatal and postnatal clinics do more than safeguard individual mothers from the complications of pregnancy and after-birth and lessen infant mortality, because the achievement of both makes possible healthy mothers and healthy children, reduces the social problems of malnutrition, disposition to illness, and disturbed family life.

Venereal clinics accomplish more than the cure of the affected. Every cure prevents the extension of infections; syphilis causes much of all insanity, and gonorrhea is the largest single cause of blindness.

The early and permanent cure of the breadwinner accomplishes more than comfort to the individual—it reduces the social problem of poverty.

The dental clinic may relieve toothache, but it also relieves disease caused by focal infection, aligns teeth and prevents loss of healthy teeth.

Follow-up service aims at more than a check on the skill of the surgeon or physician. Its purpose is permanent recovery and avoidance of the recurrence of disease.

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Hagerstown's New Hospital

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THE Washington County Hospital at Hagerstown, Md., as remodeled and enlarged, presents an interesting example of the community hospital of the future. For twenty-five years it has been housed in the stately old home of the Kee Mar College, a fashionable female seminary of the '70s. It was originally a well-designed, symmetrical building of the classic revival period, occupying a commanding site on the edge of the city, overlooking the great bowl of the Cumberland Valley. Additions made from time to time to accommodate the growing work took from the building much of its early charm, and each new department placed wherever room could be found for it made administration increasingly difficult. For several years past every available foot of space has been used, more beds have been needed and more room for laboratory, X-ray, therapy and offices. There was need for an out-patient department and many other facilities which are essential to the modern hospital. A magnificent and timely gift to the community, the legacy of the late S. M. Bloom, long a leading citizen and prominent merchant, made a new hospital possible.

The old plant occupied the only ideal site in the spacious, tree-shaded grounds, right at the edge where the plateau dropped sharply down to the valley. It had long been so expensive to keep up that there was a strong sentiment among the trustees and the staff in favor of demolishing it entirely. They had been variously advised to close up for a year while replacing the building, to rebuild piecemeal, a wing at a time, and to put up a new hospital nearer the street, and then destroy the old. They were of several minds what to do. A Building Committee of trustees and doctors was appointed, a consultant engaged, and this fundamental problem studied from all angles.

The old building was essentially sound structurally, and but eighty years young. To supply the same amount of floor space in new construction would cost at least $200,000 over and above the expense of thorough rejuvenation. It could perfectly well accommodate many departments for which fireproof quarters were not essential. The Board decided to salvage it and put up a seven-story fireproof pavilion for patients to the east, of which two floors would be below the main entrance level of the old building, yet entirely above the grade of the hillside. How sound was this decision may be visualized from the floor plans. Thanks to the ingenuity of the architects, the departments housed in the old building are in every way as adequate and conveniently placed as though they had been built anew. The T-shaped plan adopted is always ideal for a hospital of this size. The new pavilion could be erected without seriously interrupting the work of the hospital and the old structure altered following the completion of the new. As a basis for the program, a careful survey was made of the district and its past demands on the hospital to determine what was needed in space and services, what new policies should be adopted to enable it to do all that it should for its people in the future, and to fulfill the ideals of the progressive men composing its staff.

An analysis of the number of patients cared for during the past five years, with due allowance for normal population growth as well as the greater patronage which a new hospital always attracts, indicated that for some years to come an average of 110 patients a day might be anticipated, with seasonal variations ranging from a low of 60 to a high of 140. As the plan of the building was to be extremely flexible, making 80 to 90 per cent of the beds available for constant use, a normal capacity of 135 beds was recommended.

Proponents of better hospitals at lower cost will find much of interest in the general conception of this Hagerstown institution. The most extravagant thing in a hospital is a bed which is never needed. One salvation of the hospital of the future is the elasticity of its plan, allowing it to care for a general average number of patients in fewer beds. That most voluntary hospitals have too many is evidenced by the county-wide surplus, with but 65 per cent of the total capacity used in the good times of 1928 and 60 per cent in 1934. The Committee on the Cost of Medical Care found that the investment of voluntary hospitals in buildings and equipment averaged about $5,000 per bed, and that there were fixed charges for each bed, whether it was needed or not, to cover interest, depreciation and "readiness to serve" costs, which averaged $700 a year.

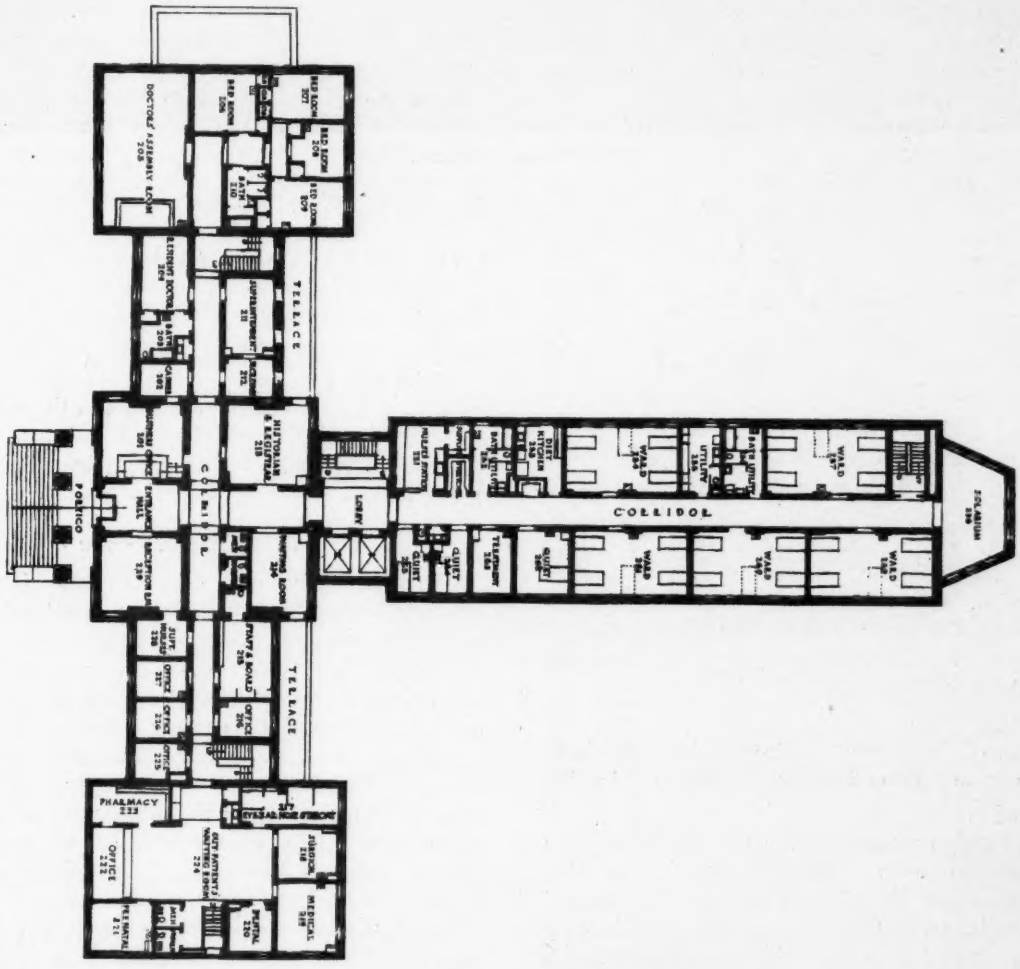
If Hagerstown had adopted the conventional capacity for its 110 patients it would have provided 170 beds, which, at a cost of $5,000 each would

have required an investment of $850,000. Actually, the total cost was $575,000 or $4,250 a bed, with due allowance for the remodeled old building. Not only was nothing sacrificed which would contribute to utility and low maintenance, but innumerable refinements were introduced, which added somewhat to the cost. Thus by the adoption of a sound and logical program the Trustees at the start made a saving of $275,000, the income from which will take care of most of the yearly deficit.

Upon completion of the survey the Board appointed as its planning staff Buckler and Fenhagen of Baltimore and A. J. Klinkhart of Hagerstown, associate architects, Daniel and Wallen of New York, mechanical engineers and Herman F. Doeleman of Baltimore, structural engineer, with the author as consultant. J. Henry Miller, Inc., of Baltimore, was the general contractor. The Building Committee had ample funds and was determined that the new hospital should be as nearly perfect as experience and ingenuity could make it—built without extravagance but built well, to insure a minimum cost of operation for years to come.

The architects were faced with many problems of design. To restore the original symmetry and charm of the old Female Seminary they removed the third story of the south wing and added a two-story wing at the north. The requirements for the new pavilion made it difficult to conform to the precise architectural style of the old structure, because of different story heights. However, by keeping the design extremely simple, using a light-colored brick and painting the old building to match, they achieved a harmonious whole. Significant in the planning of the new patients' wing is the adoption of standard room sizes, with superimposed service units, which made it possible to place the window in each room just where it should be, and still preserve uniform spacing, so important for the exterior.

The floor plans as illustrated require no detailed explanation. From the standpoint of flexibility it



Second Floor Plan—Female Wards

The Corridor Treatment

will be noted that all private rooms are convertible for one or two patients, and that all four-bed wards, slightly larger than the conventional size, can accommodate five beds. When the demand requires it, the capacity can be increased to 150 by placing an additional bed in each room and ward, and in times of epidemic or catastrophe, beds in solaria and visitors' rooms will bring the total to 170. Storage space is provided on the various floors to accommodate the extra beds. The circulation of all hospital traffic is unusually direct. The travel of patients, visitors, doctors, nurses, attendants, stretchers and supplies from where they are to where they must go, can be accomplished without confusion. On each floor at the intersection of the corridors of the new and old buildings is a colorful vaulted lobby from which open stairs, elevators, and the nurse's office, giving her complete control of all who pass.

Some of the features which make for convenience and economy in caring for patients are the following:

All supplies are sterilized in and distributed from the surgical suite: Food service and dishwashing are centralized in the main kitchen and patients' trays delivered by truck. Laundry is distributed by service trucks direct to each patient's room, with a minimum reserve kept on the floors. All supplies are received and stored in the service building at the rear.

From the bright, roomy solaria on each floor and the sun terrace on top of the building patients may enjoy a magnificent western view across the Cumberland Valley, in itself an inspiration.

The Washington County Medical Society has been assigned a large room for its meetings, the cost of finishing it with a beautiful walnut wainscot, cork floor and acoustically treated ceiling being met by a generous contribution from the Society.

Community Health Center

From the standpoint of community planning the Washington County Hospital when completed will present an interesting example of the modern ideal community health center. One of the smaller buildings on the hospital grounds is being altered to house the Public Health Department with laboratories and offices for the health officer and visiting nurses, and clinic rooms for tubercular, venereal, and mental patients. On the second floor are isolation units with a sufficient number of beds to care for the contagious cases of the county, which heretofore have had to be treated at home or sent to hospitals many miles away. Provision is also made for keeping under observation psychiatric patients before their transfer to a mental institu-

tion. Thus all of the services of the State, county and city, which have always given financial support to the hospital, will now be even more closely allied with it. The hospital itself is organizing an out-patient department, adjoining which are consultation rooms where members of the staff can examine private patients, with all of the hospital's resources conveniently at hand. This makes it unnecessary to duplicate in their own offices much of the costly equipment and trained personnel essential to modern medicine.

Of particular interest are the new materials and advanced methods of construction which were adopted. The architects, engineers, and consultant determined to take advantage of the proven results of the extensive research of the past ten years and the Building Committee, with unusual vision, gave its approval to many innovations without precedent in hospital experience. It is not too much to predict that this building will be recognized as a real contribution to the advancement of sound and economical hospital standards.

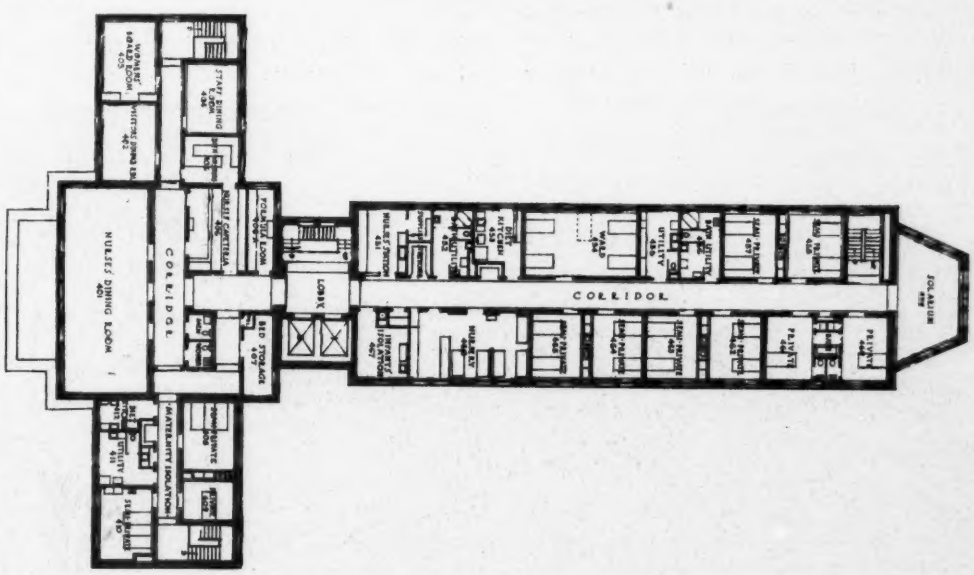
Following is a brief description of some of the features: the steel frame was welded throughout, avoiding the usual weeks of torture to the patients during the riveting period:

Floor Slab: The dead weight of the building was materially reduced and savings made in the structural steel by the use of lightweight partitions and floor slabs. For the latter "Aerocrete" was selected, a new type of aerated concrete, strong yet with its 70 lbs. per cubic foot weighing half that of ordinary aggregate. Its cellular structure resists the passage of sound to a more marked degree than any other comparable material.

Wall Construction: The conventional masonry wall leaks air like a sieve. At Hagerstown the walls as built form a wind and weatherproofed overcoat, with an inside lining which feels warm and holds the building's body heat. Twelve inches of brick laid in waterproofed mortar and furred with three inch Thermax insulating blocks give a heat loss coefficient of .088 B.t.u.'s which is 300 per cent more efficient than the usual structure. As a result the building will not only be warm in winter but cool in summer.

Windows: Infiltration of 30 to 60 cubic feet of air a minute around windows is not exceptional. A center hinged, solid steel casement window was chosen for Hagerstown, which closes against felt gaskets. The felt absorbs vibrations, excludes street noises and minimizes air and heat leaks. The window has a locking device which makes it impossible for delirious patients to jump out. Roll screens are installed at all windows, eliminating the seasonal expense of taking down, storing and putting up again.

Window Glass: The heat loss through an ordinary window pane is excessive and its cold surface draws heat from the body. A new type of double glass, "Thermopane," was used composed of two sheets of glass with an ⅛-inch dehydrated air space, hermetically sealed, between them, which cuts the heat loss nearly in half. As a result of this construction it was possible to reduce the radiation in the building, to about 50 per cent of what would otherwise have been required, and the boilers proportionately. The additional cost of the insulating measures was very nearly met by the savings in the heating plant, so that the fuel economy during the



Plan of Fourth Floor—Maternity Section

life of the building will yield extra dividends of approximately $5,000 a year.

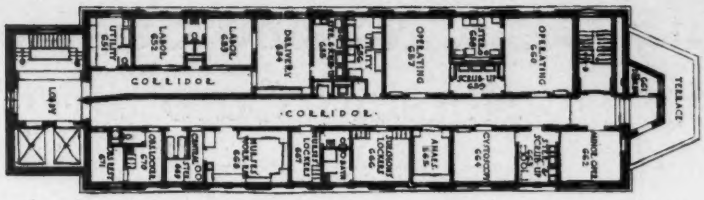
Noise Control: In addition to the soundproof floor construction an entirely new sound insulating partition was used between rooms. This consists of a three inch masonry wall of "Thermax" blocks covered on one side with heavy "Sisal craft" building paper over which is nailed one inch Thermax planks, covering all joints. The completed partition with plaster applied directly to the Thermax is 5½ inches thick. Tests made by the Bureau of Standards showed a sound reduction value of 47 decibels. The new partition is not only lighter but considerably less expensive in money and space than the double 9½ inch partition customarily used, giving but 48 decibels reduction. Acoustical material with an absorption coefficient of 85 per cent was applied on the ceilings of corridors, quiet rooms, nurseries, delivery and labor rooms, dishwashing and dining rooms. Noiseless hardware with friction hinges and soft rubber roller latches and bumpers was installed throughout the patients' building. Metal bedpan and urinal racks were plated with rubber and the doors and drawers of metal cabinets fitted with soft rubber bumpers. No feature of the hospital caused so much comment on the part of the ten thousand odd visitors who inspected it, during the opening week, as its surprising quietness.

Mechanical Plant: The hospital mechanical plant has been growing constantly more elaborate and costly. That designed for Hagerstown is infinitely simpler and more economical than that of the conventional hospital and incorporates many progressive features. Heating is by circulating hot water. High pressure steam is limited to cooking, laundry and those sterilizers in constant use—others are electrical. Blanket warmers are heated by coils connected with the hot water supply. The nurses' call system consists of a simple, noiseless mercury switch, which the patient throws on by pulling a cord, lighting Neon lamps over the room doors, at the nurses' station, etc. This should never fail as Neon lamps "do not die, they simply fade away." The doctors' in and out register and paging system are of an entirely new design, surprisingly simple, first used in Hagerstown. The doctors are summoned by a clever combination of colors and numbers. The cost of this electrical equipment was about half what is usually spent, the upkeep will be materially less—and it works. For night lights in rooms and wards, instead of the ordinary expensive recessed boxes, Neon lamps are placed in a socket under the lavatories.

There are many special features in plumbing: lavatories in patients' rooms have goose-neck faucets to facilitate filling pitchers and basins. An entirely new quiet toilet and flush valve is introduced here for the first time. Dull satin chromium plating is used throughout on plumbing, sterilizers and hardware. This requires no polishing and the hospital is saved the $1,000 a year or more spent in many institutions of this size for shining up nickel and brass. All water piping and concealed heating mains are of seamless copper tubing, with sweated joints instead of the usual threaded connections, reducing installation cost, lengthening the life, doing away with leaks and eliminating rust. The heating risers, enclosed by the furring blocks, require no covering.

Air Conditioning: With all the talk about air conditioning in newspapers and magazines it might seem that a hospital is not really modern unless completely air conditioned. In the present stage of the development of the art, it is not yet practical for general use in hospitals because of the excessive cost. However, the comfort level of the building should be high. The insulated walls will keep it cool in summer: in winter the hot water heat,

The Washington County Hospital



Operating Suite—Sixth Floor

with low temperatures at the radiators, will not parch the air as does steam, so that the absence of artificial humidification will not be serious. If mechanical cooling and dehumidification prove necessary, in the operating suites and patients' rooms, portable unit air conditioners, which will soon approach the practical, can be secured. The operating and delivery rooms, however, are provided with most of the essential elements of air conditioning—a complete change of air, with fresh, filtered air every six minutes, the exhaust of foul airs and odors, and equipment for maintaining relative humidity at 55% to eliminate the danger of static sparks.

Decoration: The hospital is made cheerful and friendly through the introduction of color everywhere—soft, warm tones in patients' quarters, brilliant and gay in lobbies and solaria. Baths and utility rooms are finished in fawn-colored tile, and marbleized asphalt tile, laid in contrasting shades, form the flooring of corridors and rooms. Throughout the building fine reproductions of Colonial furniture, made in a Hagerstown factory, add to the general homelike character.

The new pavilion has been open and in operation for more than two months, and the innovations in its design and construction have been amply vindicated by the enthusiasm of patients and staff. Such success could not have been achieved without team work and vision. Fortunately there was the will to pioneer and the time for investigation. If for nothing else, this project would stand almost unique in the history of hospital construction—the new building is completed, all alterations contracted for and all bills paid—and the Board of Trustees still has safe in the bank nearly half of the funds which were available.

Water Rates Charged Hospitals in Different Cities

City	*Practice Followed*
Albany, N. Y.	No charge
Albuquerque, N. Mexico	Regular rates
Atlanta, Ga.	Regular rates
Baltimore, Md.	Flat rate of 12c per 1,000 cubic feet
Birmingham, Ala.	Regular rates
Boise, Idaho	Regular rates
Boston, Mass.	No charge
Buffalo, N. Y.	25% discount
Burlington, Vt.	Regular rates
Butte, Montana	Regular rates
Chicago, Ill.	If 15% charity work, no charge
Cincinnati, Ohio	Flat rate of 6c per 1,000 cubic feet
Cleveland, Ohio	No charge
Dallas, Texas	Regular rates
Denver, Colorado	Regular rates
Des Moines, Iowa	Regular rates
Detroit, Mich.	50% discount
Elmira, N. Y.	10% discount
Fargo, N. Dakota	Sales tax of 2% added to regular rates
Houston, Texas	50% discount
Indianapolis, Ind.	Regular rates
Kansas City, Kansas	Regular rates
Kansas City, Mo.	50% discount
Little Rock, Ark.	Regular rates
Louisville, Ky.	20% discount
Miami, Florida	Regular rates
Milwaukee, Wis.	Regular rates—5% penalty on overdue payments
Minneapolis, Minn.	Regular rates
Nashville, Tenn.	Regular rates
Newark, N. J.	90% discount if total exceeds $500 per year
New Haven, Conn.	Regular rates
New Orleans, La.	No charge
New York, N. Y.	No charge
Niagara Falls, N. Y.	No charge
Oklahoma City, Okla.	Special rate of 10c per 1,000 cubic feet
Omaha, Neb.	Regular rates
Philadelphia, Pa.	85% discount
Phoenix, Arizona	Specially reduced rate
Pittsburgh, Pa.	Quarterly "service charge" of only $7.35
Portland, Oregon	Regular rates
Providence, R. I.	50% discount
Richmond, Virginia	Regular rates
Rochester, N. Y.	33⅓% discount
Saint Louis, Mo.	Regular rates
Salt Lake City, Utah	Regular rates
San Francisco, Calif.	Regular rates
Seattle, Wash.	Regular rates
Sioux Falls, S. Dakota	50% discount
Syracuse, N. Y.	90% discount
Wilmington, Del.	Regular rates

Nursing Costs, Nursing Service, and Nursing Care

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THE nursing service is coming into its own. It is having a renaissance, or perhaps it might be more accurately said to be emerging from the rule of thumb to a level backed by scientific methods and facts. Today there is abundant evidence of recognition of the fact that the mere massing of patients, nurses, maids, and orderlies in a particular hospital unit, without a due and knowing respect for such factors as the numerical relationship between patients and nurses, the qualifications of the different types of workers for their several responsibilities, and the physical conditions under which they work, represents an antiquated, unprogressive, disjointed kind of service that may not always provide a haven of safety for the patient.

It is my purpose in the course of this discussion to point out the interdependence of costs, service, and care. That we may establish common thinking in the use of the terms, nursing service and nursing care, I shall define nursing service as a particular personnel operating in a particular physical set-up under particular conditions, nursing care as the product of the nursing service activities. The provision of nursing care which will serve best the well-being of the patient may be set down as an accepted and major purpose of a hospital.

The Cost Study made by the Committee on the Grading of Nursing Schools gave us no actual budget data on nursing service costs. But it did give us, which was much more valuable, an interpretative measure of the quality of the nursing service maintained by the hospitals participating in the study. Thus, for example, one of the hospitals, Hospital A, reported that it would be necessary to substitute two graduates and one maid for every ten students if it gave up its school and that it would have money by so doing; whereas Hospital B reported that it would replace every ten students by nine graduates plus two maids under the same conditions and would thereby lose money. If Hospital A's substitution were adequate then Hospital B would be overstaffing its service, and if Hospital B's proposal were reasonable, then Hospital A would be shockingly understaffed. Obviously, man power (or nurse power either) cannot be cut 70 per cent, as was proposed in the case of Hospital A and the output remains essentially the same. When quantity is reduced below an accepted desirable minimum, then quality must inevitably suffer.

While the differences in staffing of the two hospitals discussed are sufficiently extreme to explain the cost discrepancies, there are other factors that require consideration for a valid comparison of the two institutions. Some of these factors are bedside nursing hours provided per patient, hours on duty of the staff, and the relationship of nursing personnel to subsidiary workers. But to list them to this group is like carrying coals to Newcastle. Costs, nursing service, and nursing care constitute a mutually influencing set of factors, and to make a comparison of the costs of nursing service in different institutions, without knowing in detail what goes into these costs, is wholly fallacious. I know of no article that presents more clearly the difficulties encountered in making cost analyses and cost comparisons than that written by Mr. Albert Buck, superintendent of the New Haven Hospital, and published in the 1928 Modern Hospital Year Book under the title, "A Study of Hospital Service and Costs in the United States." In the manual on *Hospital Accounting and Statistics* recently published by The American Hospital Association it is pointed out that "Individuality or peculiarity implies a comparison or contrast with other institutions . . .," and then it goes on to say that, "peculiarities are revealed most effectively through a common standard of comparison or measurement."

Relationships Between Cost of Service and Nursing Care

I should like to present one other illustration to signal out relationships between costs, nursing service, and nursing care. In this illustration you will perceive that other standards of comparison or measurement are brought in.

During the last three and a half years my job has taken me into about three dozen hospitals—large hospitals, small hospitals; official hospitals in the sense of being operated by cities or states, unofficial hospitals operated by private governing boards; general hospitals, special hospitals; hospitals with schools of nursing, hospitals without schools of nursing. The time I have spent in these hospitals has extended from one day to two weeks,

and the periods have covered both day and night. The purpose of my visit has varied in different institutions, but a major consideration in all instances has been an appraisal of the nursing service. Whether the hospital was associated with a school of nursing or not, the character of the appraisal remained essentially the same. I shall describe the nursing service in two of these hospitals, both of which our organization was asked to survey about eighteen months ago. These two institutions illustrate rather strikingly those factors which either militate against or make for good nursing care and which affect the costs of the service. Let us call one Hospital X and the other Hospital Y.

Hospital X had a daily average of 30 patients and maintained four services, surgical, medical, pediatric, and obstetrical. The hospital statistics disclosed that about 55 per cent of the patients were surgical, 30 per cent medical, 10 per cent children, and 5 per cent obstetrical. Thus, the patients cared for were largely of the surgical classification, with a negligible number in the pediatric and obstetrical groups.

This hospital conducted a nursing school. Obviously, from a clinical standpoint, it should not have operated one. It offered, as we shall see, a nice illustration of the relationship between hospital budgets and nursing education. But this discussion is not concerned with nursing education except as it may affect the quality of the nursing service.

Three ward units were included in Hospital X, two located near to each other where adult and children medical, and adult and children surgical patients were housed, and a third for obstetrical patients some distance away from the first two. One graduate nurse supervisor was responsible for the three units. The ward nursing staffs consisted of student nurses, half of whom were still in the preliminary period. The head nurse on the largest and busiest ward, where the writer spent most of her time, was a student in the early part of her third year. Otherwise, the nursing service staff on this unit consisted of six student nurses, all of whom, except two second-year students, had been in the school but seven weeks, and a maid who gave about two hours of her time each day to the unit. On the day of the visit there were twenty-five patients in the ward.

Consider the staff as it functioned: the graduate nurse supervisor distributed bed linen, checked supplies, made certain routine inspections, and accompanied the physicians to the bedside of patients. She gave no attention to the instruction of the students or the care of the patients. Her duties apparently were limited to the managerial, housekeeping kind.

The time of the student head nurse was occupied chiefly in recording orders, checking orders, writing up charts and reports, and assigning duties to the other students. One of the second-year students was on night duty. The other, on day duty, was engaged in giving out medicine, cleaning the medicine closet, assisting with dressings, and making surgical supplies. Thus, the serious and responsible business of giving bedside care to twenty-five patients devolved upon four untaught, untrained, unsupervised, and untried young preliminary students who were shockingly unprepared for their tasks. As an inevitable result of the shortage in maid time, all of the student nurses, and particularly the younger ones, were doing the ward cleaning and other duties of this character.

It was difficult to find out the hours on duty. However, from the information obtained and the observations made, it appeared that the day student nurses were on the ward nine or ten hours and the night student nurses twelve hours. The ward was understaffed both day and night, there being but seven students, which number included the head nurse, for twenty-five patients, some of whom were seriously ill.

I might elaborate further on this situation and describe for you specific instances of poor nursing in performance and in personal relationships. Hands were not washed (this omission was largely due to inadequate facilities—too few washstands, no paper towels, and a scarcity of soap—all matters of cost), and simple procedures, such as taking temperatures, giving baths, and enemata, were carried out with but little regard for the niceties of technique. I think, however, I have amplified sufficiently to indicate that this hospital violated the cardinal principles contributing to an effective nursing service and good nursing care. In the first place, the nursing personnel as a group was poorly qualified; in the second, students were performing procedures and carrying responsibilities for which they were not prepared; in the third, work which should have been delegated to maids and porters was assigned to students; in the fourth, the hours of the staff were too long; in the fifth, far too little time was provided to give the patients the proper care even if the personnel had been well qualified; in the sixth, the working facilities were inadequate; and in the seventh, the element of supervision was conspicuously absent. This last defection is particularly serious in a hospital where practically the entire nursing service is provided by student nurses. It means, of course, that the students are learning by the trial and error system, a risky method applied to a situation where the subjects are human beings. One of the rock-bottom principles that should prevail, in a hospital where the nursing staff includes student nurses, is that adequate super-

vision be provided, otherwise, not only do the students not receive the proper instruction, but, what is far more serious, the patients do not receive safe care.

That in brief is the picture of Hospital X. It is plain to see in that institution the relation between faulty nursing practice and costs.

Hospital Y also maintained a school of nursing. The hospital had a daily average of 147 patients with an approximate distribution of 50 per cent of the total patients on the surgical service and 25 per cent on the medical and pediatric services each. Its ward nursing service presented the exact antithesis to that in Hospital X. There was abundant evidence of well-selected personnel, of well-chosen assignment of duties, of clear and concise records and reports, of a thoughtful program of patient supervision and student instruction, and a sufficient graduate staff to put the program into effect. The constant rush and the evidences of fatigue so apparent in the nursing staff of Hospital X were absent in the staff of Hospital Y, probably because of the provision for a reasonable number of workers, professional nursing and subsidiary, and a reasonable schedule of hours.

Merely to relate the basic factors underlying the operation of Hospital Y's nursing service does not give the complete picture. One had to be an eye witness over reasonably lengthy periods to appreciate its excellence and finely human side. Thus, for example, the ward procedure book was not limited to a description of manual technique and ward procedures. Consideration was given to the emotional aspects of each ward situation. Admitting a patient involved not merely a series of routine questions to be asked and slips to be filled out. As described in the procedure book it was an intensely personal affair for the patient and patient's family, and a special opportunity for the nurse to establish rapport with both patient and relatives. One's total impression of the nursing service in Hospital Y was that paramount to all considerations was the well-being of the patient. A purpose had been defined—good nursing care—and a qualified personnel, enough nursing time, and proper working facilities (all cost adding elements) had been provided to accomplish that purpose.

I do not know how much thought and time had gone into the planning and putting into operation of the nursing service of Hospital Y. I venture the statement that every element making for good nursing care and the economical attainment of that care had been scrutinized and tried out before being accepted as a part of the nursing service program. Probably all of us know institutions where tradition and long time customs have given way under the new technique of investigation. These institutions have sought to examine the nursing service by applying methods similar to those employed by engineers in industry. They have, by these methods, analyzed the whole into parts, and again broken the parts into elements, and out of these elements either the existing practice has been validated or a new structure built. Interesting as a detailed discussion of such methods would be, our time limit forbids it. We can, however, consider some of their broader aspects and the outcomes which result from their use.

Clear Concept of Duties Necessary

One of the first principles underlying the organizing or reorganizing of the nursing service of a ward unit is the gaining of a clear concept of the duties to be performed on that ward. To this end an analysis should be made which will disclose duties that are of an administrative type, duties that have to do with ward housekeeping and cleaning, duties that are more or less of a clerical nature, interdepartmental duties that involve cooperative relationships between the nursing staff and the staff of some other department of the hospital, duties that are directly concerned with the bedside care of patients, and duties that have to do with the supervision of that care. From this analysis, repeated from time to time, duties should be grouped and specifications drawn up, describing the qualifications of the personnel required for their satisfactory performance. The method here described, of analyzing the situation and evolving specifications for the workers who shall participate in the situation, has long been employed in the industrial world where the products are things. Is it any less important that we apply it to a hospital nursing service where the products are people?

Once this analysis is made and personnel specifications drafted, appointments are made. These appointments include the supervisor, the head nurse on the ward, the assistant head nurse when indicated, the graduate staff needed for bedside care, the subsidiary workers, and so on. Not only should properly qualified personnel be appointed, but it is equally important that they be appointed in sufficient numbers. What constitutes an adequate supervisory-head nurse staff can not be arbitrarily stated since such conditions as hospital construction, character of the bedside staff (whether graduates or students or both), the particular type of patient, and the number of doctors that visit the ward will influence the administrative and instructional needs of the particular unit. In general it is suggested that one head nurse and an assistant head nurse, or the half time of a supervisor and full time of a head nurse, be provided for approximately every twenty-five patients. The number of

bedside nurses needed on any ward will depend primarily on the type of patient cared for in that unit. Thus, children require more time than do adults; obstetrical patients, as a rule, less time than medical and surgical patients. Too much emphasis can not be placed on the relationship between adequate time and adequate nursing.

Apportionment of Bedside Nursing to Different Services

Within the last eight months the Department of Studies of the National League of Nursing Education has gathered from a number of representative hospitals in the East and West information on the bedside nursing time that they provide for the different services. The nursing time provision which is here submitted is upon the basis of this material, plus data assembled in field surveys by our organization and in other studies that have been made on the subject. It is desired to point out that these nursing hours represent the *average* provision per patient in each 24 hours, and that while some patients may require considerably more, others may require fewer hours. The hours for ward and semi-private patients are as follows:

Adult medical

An average of 3 to 3½ hours of bedside nursing in each 24

Adult surgical

An average of 3 to 3½ hours of bedside nursing in each 24

Obstetrical

Mothers—An average of 2½ to 3 hours of bedside nursing in each 24

Infants—An average of 2½ to 3 hours of bedside nursing in each 24

Pediatric

Infants—An average of 6 hours of bedside nursing in each 24

2-5 years—An average of 4½ hours of bedside nursing in each 24

5 years and over—An average of 4 hours of bedside nursing in each 24.

With respect to the subsidiary workers, the number of this group will be affected by the type of patient and the policy of the hospital in delegating duties to them. It is particularly important in the case of these workers that their duties be carefully defined and that they be given no responsibilities for which they are not qualified in the care of patients.

The hour schedule of the staff is an important consideration in providing a consistently sustained quality of nursing. When nurses are on duty 9, 10, and 12 hours over long stretches of time, regardless of the damaging effects on the nurse herself, do we know the hazards to the patient? It is said by no less an authority than Dr. Lillian M. Gilbreth that "fatigue affects skill very seriously; that it breaks down efficient habits and allows a return to less effective methods."* The tendency for the long hospital day is giving place to a more reasonable schedule, and throughout the country the six-day, 48-hour week is steadily gaining ground. In the case of the student nurses the 48-hour week includes classes. Several schools have gone a step further and introduced a 44-hour week, classes included.

The Ward Procedure Book

Clear-cut directions of personal responsibilities and routine activities are essential to a common understanding in a situation where so many people are working together as in a ward. A ward procedure book is a necessity. The usefulness of this book is in proportion to its thoroughness, the extent to which it is kept up to date, and its accessibility. Then too, it is important that the duties of all workers on the ward be outlined and that these outlines be posted where they can easily be consulted. Assignment of patients should be written on a form especially prepared for that purpose. These are just a few of the essential ward records. Effective and safe ward operation calls for a well-defined system of written reports and instructions to workers.

Of all the principles underlying ward administration there is none more vital to skillful nursing care than that governing the assignment of patients to nurses. This statement applies particularly in a hospital where the bedside nursing staff includes student nurses. Too often, students who are professionally immature are assigned difficult and seriously ill patients. This practice, without doubt, is poor educational procedure, but of much greater consequence are the hazards to the patient. To safeguard patient care and to provide proper earning opportunities for the student, an assignment plan, based upon the student's preparation and experience and covering a progressive sequence of responsibilities, should be worked out on the different services by the supervisor and head nurse consulting together. The plan should be adhered to within the limits of the current ward situation and the personnel available. Digressions from it should be rigorously avoided for the protection of the patients. If I seem over-emphatic in discussing the importance of a sound assignment principle, it is because of the many times I have seen this principle violated, particularly in the care of patients at night. Yet the

*Gilbreth, Lillian M., Ph.D. Fatigue as It Affects Nursing. American Journal of Nursing, Vol. 30:25-8, January, 1935.

primary end product of a nursing service is the bedside patient care. It is the acid test by which the organization and administration of the nursing service may be judged.

Having discussed some of the factors underlying good nursing care let us now look at the accompanying costs. Nursing is an art, and no matter how gifted the artist, she requires a setting and the tools that will enable her to do her best work. It would be folly for us to predicate that good nursing care is not more costly than poor nursing care. Thus, for example, it requires more nursing time to give patients three hours of nursing care in each 24 hours than it does to give them two hours, and nursing time costs money. And it requires more nurses to staff the nursing service when a 48-hour weekly schedule is followed than it does when a 55-hour schedule is in force.

Nursing Service Economies

Nevertheless there are ways of introducing nursing service economies. Each of us knows how a well-planned unit (with respect to service rooms and running water, convenient and sufficient space for working at the bedside) expedites the numerous routines and procedures for the ward personnel. Some of this goes back to the construction of the ward and sometimes poor planning may be corrected while at other times it must be borne with. Adequate equipment and supplies constitute a second important item, both in expeditious nursing and in reducing replacement outlay. Have you ever seen a nurse pin a pillow in a sheet because the supply of ward pillowcases had been exhausted? I have, and I have also seen that sheet when it came off the pillow. Try to pin a pillow in a sheet, especially if it is a new sheet, and see how long it takes. Or better still have some one time you in pinning it and also time you in slipping the pillow in a case the proper size. Then multiply the difference in time between the two processes by the number of pillows covered with sheets on that day. From a time-consumption standpoint, the results may be surprising. As to the condition of the sheet when it is taken off the pillow, that depends on the size of the safety pins used, the age of the sheet, and how it was handled. Sometimes it may still be a sheet and then again it may not.

Since it has been my good fortune to be engaged in my present job, I have had the opportunity to examine the ward daily time slips in many different hospitals. I have been much interested in the manner of daily time scheduling. It is the able head nurse, aware of the approximate nursing load on her ward, of the distribution of this load *over different* periods of the day, of the total nursing hours at her disposal for covering that load, who plans the time of her staff to the best advantage. Economical time planning can not be carried out and a consistent balance between load and nursing hours be maintained throughout the 24-hour period, when the entire staff is on an unbroken eight-hour shift. Unless some members of the nursing personnel are assigned broken hours there will be periods of nursing time wastage, and nursing time costs money.

While the economies inherent in good supervision provide little evidence measurable in dollars and cents, a good supervisory system inevitably reduces the energy expenditure of the staff and the suffering and length of illness of the patient. It is for this reason that adequate supervision is so essential.

Principles Fundamental to Good Nursing Service

I have endeavored to confine it to principles and factual information that are a result of our experience in the last five years, and to show from these facts how nursing costs, nursing service, and nursing care are interrelated and also how inseparable they are from each other. I have purposely steered away from those time worn and too often lightly used words, organization, administration, and standards, for I think that the achievement of good nursing care goes back of them all and that before we can set up sound organization and administration with acceptable standards, we need to know the constituent elements that go into the making of this much hoped for end. In closing I submit therefore for your thoughtful consideration the following principles as being fundamental to a nursing service economically administered:

1. Making an analysis of all the functions or duties to be performed on the ward.
2. Classifying these duties into areas or groups according to the type of worker by whom they are to be carried out.
3. Specifying the qualifications of the workers for the different areas or groups of duties and making appointments upon the basis of these specifications.
4. Providing sufficient supervisor-head nurse personnel to insure the proper supervision of patients and instruction of students.
5. Providing enough bedside nursing time to assure a good quality of nursing care for the patients and an opportunity for the students to learn good nursing.
6. Assigning patients to nurses (especially in the case of student nurses) upon the basis of the preparation of the nurses to care for those patients.
7. Providing adequate subsidiary workers and limiting their duties to the level for which they are prepared.
8. Planning the time of the nursing staff so

that all periods during the day and night will be properly covered.

9. Maintaining a schedule of hours for the staff that insures good care of the patients and reasonable rest and recreation for the workers.
10. Developing a clear-cut system of written reports and instructions.
11. Providing equipment and supplies essential to good nursing procedure.
12. Planning (whenever possible) the physical layout of the ward to save human energy and time.

and finally,

Planning each aspect of the nursing service so that all patients shall be guaranteed adequate nursing care.

Practical Advice in Training of Interns

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In considering this topic, the first thought which occurs to one is, has the hospital actually made a serious effort to utilize for its interns the available clinical opportunities? Unfortunately, in most instances, the answer is NO.

When a new group of interns comes on duty, usually every six months, or at whatever interval the hospital schedule calls for, they may or may not be given a preliminary greeting and informed of the rules of the hospital, after which they are turned loose to the mercy of the four winds—and tradition—to obtain for themselves whatever they can, under whatever conditions they make for themselves.

In reading the literature we find a great number of suggestions regarding the training of interns—but few hospitals have made an organized attempt to apply these suggestions. Dr. Frederick E. Sondern, President of the Medical Society of the State of New York, states, "The advantage to the hospital of some affiliation with a high grade medical school is established beyond doubt, due to the degree of thoroughness and precision in the professional work which results." It is that thoroughness and precision which should be the goal of every hospital and if a university affiliation is not available, make the hospital the university. It should be called the "Individual University," as it would be an individual problem for each hospital to prepare its own curriculum. Universities have gone to great expense to build hospitals to have available clinical material. The average general hospital has an abundance of clinical material, and all that is necessary is the proper organization, the stimulus for and the application of the attending staff to impart to the interns the knowledge to be learned from this wealth of material. Such teaching has a double function, not only that it imparts to the intern, but also trains the attending to formulate his ideas in assimilable form.

With the advent of the modern movement for more progressive training of interns, the time has come when the hospital must take inventory of its facilities and make a serious effort to correct its faults and utilize its clinical material.

To do this properly it must first consider the educational background the modern interns possess—an average of almost twenty years has been spent to prepare themselves for internship. Does it not seem a pity that there has not been a more concerted effort on the part of the hospital to arrange and carry out a definite and better organized program for the proper and practical instruction of the intern staff?

Second, to approach this subject of the continuation of postgraduate study for interns, several factors must be considered:

1. *The Fundamental Purpose of a Hospital*

The purpose of a modern hospital is fourfold, namely, (1) Prevention of Disease, (2) Cure, (3) Education and (4) Research. The primary purpose is the care and treatment of patients. In order that there may be an intelligent accomplishment of this purpose the apparent necessity of the practical education of the young doctor is obvious. He should not only be taught the best methods, but see them demonstrated. This in turn may stimulate a desire for research—research does not necessarily imply devoting one's time in a clinical laboratory. As Dr. George R. Minot states, "The physician becomes inefficient and nonprogressive unless he is inspired by imagination and curiosity to learn. It is impor-

tant, therefore, that he should appreciate the spirit and understand the principles of research, and also develop an investigative habit of mind. These attributes must be applied at the bedside in the elucidation of the phenomena of disease."

2. *The Qualifications of the Attending Staff*

It is to the attending staff, who so generously give their time to the hospital and who are compelled to assume so many responsibilities, that we must again turn for assistance and stimulation in the teaching of the intern staff. While it may appear to be an added duty to an already overburdened body, our experience has been that the majority not only are willing, but have volunteered their cooperation. It is conceded that all are not gifted teachers, possessing that combination of personality, knowledge and ability to impart to others; but it is also known that one of the fundamental duties of a doctor is to instruct. With that duty in mind, by concentrated preparation, cooperation and the sense of their responsibility to their duties, the attending staff may be made the nucleus in the arranging for a very definite teaching program.

3. *The Nursing Staff*

The duties of the nursing staff, are, as a rule, taken for granted. Orders are written by the attending or intern staff and it is the duty of the nurse to comply with these orders. But, how many of the interns know the technique required to carry out these orders; or have given a thought to the amount of training required for a nurse to be competent to carry out their orders; or the number of nursing requisites to afford physical comfort to the patient? It is to this group that we must turn for instruction in the important care that the doctor may be called upon to administer in the home, where the patient cannot afford the services of a nurse or where one is not available.

4. *The Attitude of the Intern*

As previously stated, the intern has had twenty years of preparation and voluntarily elects to spend two or more years in a hospital to obtain the fundamentals of the practical application of his theoretical knowledge of medicine. In other words, the purpose in applying himself further is to obtain what is commonly called "experience." There are two types of experience, first, "personal," or that which fails under the immediate observation of an individual. The keener the mind, the more retentive the memory, the greater will be the value of personal experience, but personal experience is limited by personal opportunities and environment. On the other hand we have "vicarious" experience which comes through the narrated experience of others by means of magazines, books, reprints or translations.

Up to the time the intern starts his hospital service, the greater part of his experience has been vicarious. Now he is confronted with the opportunity for personal experience and frequently, because this internship is the least efficiently planned and performed of the entire clinical preparation of the student, its importance is, to a great extent, not fully realized. It is only when the intern has completed his hospital training that he wakens to the fact that, due to lack of definite objectives and the proper organization of his time, opportunities and training he might have utilized to advantage have been neglected. Of course, on the other hand, a good number are taking the educational aspects of the intern work very seriously and are deriving most of the benefits and opportunities the hospital has to offer.

It is our purpose to attempt by organization to make available for the interns as much of the clinical material and practical procedures as he cares to absorb. At this point, one must consider the psychology of the intern. After all the years of schooling with its continual grind and numerous anxieties, does he wish to continue this routine or does he consider his internship a well-earned rest. Our experience has been for the greater part that the intern, if properly approached and consulted as to his wishes for furthering his practical studies, is anxious to continue his lust for knowledge.

It is interesting to note that the realization of how much more we might give our interns in our own particular hospital, was brought about by a request on the part of the interns for additional educational programs. With this thought in mind, we have taken into consideration what Professor Julian Huxley states: "We shall never succeed unless in every problem involving human material we pay as much attention to the individual differences as to the common resemblances." Fortunately, there have been far more common resemblances than individual differences and when the individual differences do occur, an attempt is made to mold them into resemblances.

The hospital that accepts interns must also accept the responsibility that it implies. The intern is there to learn and complete with practical work and suggestions the largely theoretical part of his earlier training. His reaction to the hospital depends on the character of training he receives. There is not much inspiration in the routine writing of case histories, giving anesthetics, holding retractors or doing urinalyses. Up to the present time the hospital has not concerned itself with the proper type of education to the extent it should. The training of the intern should lie in the hands of the hospital just as the training in medical school is now carried on by the faculties of our best universities. It cannot

be denied that the function of training the intern is an important one. Not only should treatment be taught, but should be combined with practical demonstrations so that the intern will be cognizant as to whether the patient is receiving the proper treatment and if this is performed in an efficient manner. The primary obligation of a physician is toward his patient, and if the doctor is not taught the recognized methods of procedure it is quite obvious he is unable to judge if these procedures are carried out in an approved manner, whether it be in or outside the hospital.

It is not our purpose to discuss the type of internship, whether "straight" or "rotating" or the length of service. Regardless of whether the young intern's objective is a general practice or a specialty, the fundamental training should be identical in his primary internship. Investigation has shown that the practical education of nurses in this country is far more standardized and rigidly controlled than has been the education of the intern. This is a deplorable fact, but nevertheless true.

With these thoughts in mind we have attempted to remedy the existing conditions by starting with the fundamental training. By fundamental is meant to start at the beginning; to know what the constituents are; how to prepare and apply, and what results to look forward to in the various forms of treatment. Through the cooperation of Miss Teresa D. Sormani, superintendent of nurses, assisted by several of the senior members of the intern staff, it was possible to formulate the following program which was given to the members of the staff beginning their service on July 1, 1935. This is to be repeated as each new increment begin their service.

Interns Program

Lecture I

1. Discussion of Rules and Regulations of the Hospital—Dr. E. Giddings
2. Talk on Social Service—Mrs. Alice J. Turck
3. Diets by Mrs. Helen Gwaltney

Lecture II

Practical Demonstration

1. Lumbar Puncture
2. Intravenous Infusion
3. Phlebotomy or Venesection
4. Hypodermoclysis
5. Paracentesis
6. Chest Aspiration or Thoracentesis

Lecture III

Practical Demonstration

1. Lifting and Turning of Patients in Bed
2. Restraint of Patient for Treatment or Examination (child or infant)
3. Every day procedures (Care of hair, nose, mouth, ears, and back)
4. Ear, Nose and Throat Irrigations

Lecture IV

Practical Demonstration

1. Counter Irritants (Flaxseed poultice, mustard paste, turpentine stupes, mustard bath for children)
2. Enemas (Types, Purpose, Supplies needed) (X-ray plates will be shown in X-ray department of X-rays taken after an enema has been properly and improperly given)

Lecture V

Practical Demonstration

1. Cold Sponge Baths
2. Cold Pack
3. Hot Pack
4. Care of Instruments (needles, syringes, scissors, forceps, etc.)
5. Bed-sores, prevention and care of

The details of each of the above mentioned lectures have been compiled in book form, a copy of which has been given to each of the interns, for his future reference.

The demonstration of a mustard paste or an ear irrigation may appear to be beneath the dignity of an intern, but as a matter of fact, when these demonstrations were given their interest was manifested, and led to many constructive inquiries. While this may appear to be and is, fundamental, its purpose is to familiarize the new interns with the essentials of common procedures, too frequently either overlooked or entirely forgotten. They are the procedures a doctor in practice may be called upon to do or direct.

Looking over the program, the thought occurs, and quite naturally too, what relationship does social service activities and the details of dietetics have to do with an intern's training.

Quite frequently young doctors, because of little or no contact with this organization, look upon the hospital social service department as a stepchild, and some never take the time or the trouble to learn its functions. Our purpose was to acquaint them with the fact that "the primary purpose of a social service department was to act as interpreter of the patient to the doctor"; to have them know how much benefit they may derive by consulting and cooperating with social service; and what is more important, how much benefit the patient may derive in the form of convalescent and follow-up care if social service is notified of the conditions.

As is pointed out by Dr. Milton Bridge, "The practicing physician as a rule is completely unskilled in reference to dietetics." Recognizing the

truth of this statement we considered it pertinent that the young doctor should be instructed in the details of this highly specialized branch of the hospital in order that he may know what facilities are available and what results may be expected.

It is our intention to follow through into the clinical aspect and we now have two additional schedules ready to put into effect in the fall, the results of which we shall report in the near future.

In order to inaugurate these new activities, it is necessary that the various sub-divisions of the hospital cooperate with each other. Starting with the president of the medical board, whom we might compare to the dean in a medical college, the superintendent as secretary or executive officer, following through to the attending staff, or faculty, assisted by the nursing service and the administration officers, who well may act as contact between the faculty and students, it will be essential that they work in harmony to prepare such attractive programs that the interest of the interns will never wane. We, in this hospital, are indeed fortunate in that the medical board, the attending staff and the nursing service are in sympathy with the administration officers' attempt to utilize our facilities to turn out young doctors who will be a credit to the institution and better fitted to meet the problems which confront the modern practitioner.

The Small Hospital

Its Opportunities for Community Service Other Than Hospitalization

A. F. BRANTON, M.D.

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THE SMALL HOSPITAL is one of the American institutions. 1,700 of these hospitals are located in the small cities and rural communities—each of these institutions is vitally interested in being of more help to the community which it has the honor to serve.

Community service engages the interest of every organization, not only in what to do but in how to do it. It leads to a friendly spirit of rivalry between our groups and makes our individual administrators vie with each other in their efforts to render a larger and more complete service.

Hospitals in the beginning were originated by the community for definite reasons and in the hope that they would perform definite duties. They were to be a community asset and as such a haven for the sick and a boon to the well. It was to be a health factory, taking in the imperfect materials laid at its door with the hope that it would turn out perfect products, able to assume their positions in society. In addition, it would segregate and protect the sick, the contagious and the mental so that life for the healthy would be safer, more pleasant and easy. Perhaps the trite expression, "making the community a better place to live in," had its foundation and justification in the founding of the community hospital.

The smaller hospitals stand in a peculiar relationship to their communities. They are in intimate contact with those about them in daily activities. Their successes are occasionally taken notice of, their failures are common gossip on every lip. The lights in the operating room at night start a wave of community interest and wondering. The new babies want to be seen by all the inhabitants although when the baby arrives home only the closest friends stop in. An unfortunate death brings down misgivings on the efficiency of the institution. They are in the spot-light of local interest and it cannot be dodged. Today no hospital in the smaller center can stand alone and aloof furnishing only hospitalization. Even though it should wish to do only that one thing, it could not, for community pressure would exert such an influence that it would cause such a hospital to accept its manifold responsibilities. Today community service demands and receives. It is refreshing to note how many things have been done by certain hospitals in connection with their functioning.

Community Service—Its Purpose

May I deal for a few moments in the abstract, on the general subject of community service. It has been said that the purpose of community service is to liberate the power of expression of people and communities. Do not our hospitals have personality, appeal and something to liberate? To help communities provide wholesome education of adult and child and to enable them to meet the needs of a new day in a way which will make for high citizenship and for community morale should be the purpose of such effort. Leisure time of hospitals

idly spent can do little to improve local conditions. When individuals or institutions become inarticulate or lose the power to participate they are doomed to failure. Rome was conquered by the very Gauls who participated for the amusement of the Romans. Community service must be a community agency. It should blend all interests into the common good. Greed, glamour and self-glorification should fade into the background, and to the fore should come worth while betterments attained by self-sacrificing efforts, aimed to improve the locality. The hospital stands as a self-sacrificing beacon light, having little to do with creed, serving rich and poor alike in time of need, knowing no boundaries of nationality as it pours its personality into the life of its people. How well does the hospital fit into the demands of community service needs only be mentioned. Then the hospital becomes a place of splendid opportunities, and when these opportunities are accepted it becomes much more active in its community relationships. Your institution can be the melting pot, and with more thought given to other channels than the ministration to the sick you can by word, deed and action mold others' thoughts into harmonious agreements, characters into assets, bodies into healthy living. Where do you find individuals more willing to endure the sufferings of others, more anxious to help as strength permits, curbing their likes and dislikes, than in a ward? Do we not have at hand, every day, the obligation and the opportunity to help make better, healthier, cleaner-thinking individuals as we come in daily contact with those who trust us with their lives? This can then be termed individual community service, if you please, and as such it is yours to do and to enjoy. Life is a grindstone and whether it grinds a man down or polishes him up, depends on the stuff he is made of. Let's try to produce diamonds.

To discuss this subject only in the abstract would leave one with little to carry away of a practical nature. In the following suggestions of concrete examples of community effort, many will seem commonplace because we have been doing them all the time without considering their correct position, as extra-curricular, in administering to the sick. Others will seem of little value, yet here and there someone may find in their suggestion an idea that may prove worth while. With this humble explanation they are offered and no doubt many more things will be added from your experience.

First, are you, as head of a highly trained profession, assuming your place in lay organizations dealing with health problems? Are you a member of your Red Cross Board of Directors, active in your public health organizations? Are you taking a proper interest in governmental health problems, watching where money is going from Christmas seal funds? You should participate in service clubs, local civic organizations, Parent Teachers Associations and scientific societies. Have your hospital represented at all times. Make the community feel you are interested in its well-being. In your fraternal and social lives you can do much in an unobtrusive way to help your hospital receive consideration.

Nurses Trained for Community Betterment

Next we turn to the nurses' training school, long considered an integral part of the hospital routine, yet really organized for community betterment. I shall only mention in passing that nurses are and should be taught to consider their duty as one of preparation to their people. We, in the smaller sections, have found ourselves with a scarcity of registered nurses willing to go into homes of rural folks, and it seems that we are heading that way again. Eight hour duty, increase of pay and ideal working conditions are of little use to the great majority of our sick, and certainly of little value to the nurse who must receive pay for services rendered, when there is such a limited percentage able to avail themselves of these services. We are going to see that adequate nursing service is provided for our community in one way or another. I am afraid, unless the nursing leadership calls a halt, that large numbers of hospitals of the small type will undertake to train practical nurses, free of the encumbrances of strict regulations and requirements. It has been estimated that 75% of all nursing can be accomplished by trained helpers so that the fully trained registered nurse may find her plight even worse. Many of us have given up our training schools and as such it has been an aid to the unemployed nurse. For this reason we expect the nursing profession to take into account our needs, should the occasion arise.

Small Hospitals and the Public

Hospital Day provides a real community effort. In our hospital we are able to have several weeks of newspaper publicity concerning the day. We extend invitations to all mothers and babies who have used our hospital the past year as a birthplace. Between the hours of two and four in the afternoon we invite the general public to visit us, and serve a light lunch. We feel in this public contact that we are not only benefiting ourselves but that we are creating interest in all hospitals and forming goodwill.

Public health education should be a prime objective towards community upbuilding. Where better can we teach mothers in the fundamentals of a good healthful citizenship than in an educational procedure concerning the newborn? Where can

people be taught personal hygiene better than in the sick room with the personal touch that is there? One hospital invites in the various organizations dealing with health problems and makes the hospital the center for such activities. The solution of sanitary problems may well be focused in the hospital. You and your trained nurses can do much to encourage toxoid and smallpox vaccination in all ages. The small hospital should be a focus-point in public and individual health problems and education and of real aid to the doctor in the carrying out of this program.

The hospital auxiliary is a splendid contribution to a hospital. By the interest of the local group, an institution receives much of material worth in labor and supplies as well as good counsel. In turn your opportunity is given to present to a group, who do fairly well in disseminating information, the needs and problems of hospitals as well as costs of service, and in raising the curtain of mystery that surrounds many hospital procedures. You have in the auxiliary a real tangible pot of gold at your command. Use it to the fullest extent to cement your community contacts.

Hospitalization insurance will have much space on the program of these few days and so I shall but quickly mention that we of this small hospital section, must be alert to its possibilities. Our big brothers are charting the course, as yet few of us have felt like assuming its responsibilities, but we shall have to take up the problem in the near future, both for our own community good and the help that it will bring to us in a financial way. We should be prepared to adopt such insurance before it is forced on us by public demand, and we lose the control.

The Education of the Public

The education of the public to hospitals should be an everyday consideration. Are we, or have we, people prepared to present the hospital angle before lay organizations? We should have the many fine pamphlets, dealing with hospital services, available in our waiting rooms. We should bring to the patient the moment he enters our portals, the friendly helpfulness of hope, kindness and intimate attention so that their fear and dread is allayed. When we get the whole population into the frame of mind that the hospital is the best place to get well in, we will have solved many problems for ourselves. Do not forget the many fine moving picture films that are available for your use.

The assistance at various clinics by the lending of our specialized personnel is another way we can be of benefit. Tuberculosis clinics, newborn, prenatal and child health clinics visit each of us under the sponsorship of various organizations. Be ready to have your representatives present. In this way you can control certain aspects that might arise and their presence there will inspire confidence in local hospitals.

Laboratory service outside the hospital can be turned to financial advantage, as well as of great convenience, to doctors who may not feel able to hire a technician. It may be the determining factor in whether hospitalization is necessary or your hospital is selected. Doctors in nearby small towns will be most appreciative. Your X-ray department should always be available.

One of the best ways that I know of to build up your institution in the eyes of the public is through the staff. This is the group of men who makes its continued functioning possible. Do not neglect their good-will and the praise that can come through the staff. Doctors apparently like to eat, so a staff dinner occasionally with a well-filled table, or social evenings with the members of the staff and their wives, will go far to enable you to offer more to the public.

Our hospital acts as a nurses' registry. It has become so recognized that new nurses coming into the community leave their name, qualifications and address with us and hardly a day passes but that some doctor as far distant as 50 miles calls on us to provide a nurse, or some lay person calls for professional nursing help. We merely keep an alphabetical card system, always available.

The Girl Scouts offer a splendid opportunity for community action. One of our nurses is a merit badge examiner in first aid and home nursing, causing dozens of these fine young ladies yearly to come to the hospital to learn bed-making, baby care and the simple essentials of nursing care. Then many others come to demonstrate their ability to pass such examinations.

Today your X-ray machine, the fluoroscope, the electrocardiograph, the basal metabolism machine are wonders to the youth studying science in the high school. Make these things available to such high school classes and be surprised at the speed with which the invitation is accepted.

Each year in every communiy there occur fairs of one type or another. For years and without cost we have been furnished a large room in the main building at our County Fair which we have fitted up as a free nursery and provided trained nurses in charge. There the mother "parks" the babies without cost and this year over 60 babies were so checked during the two days of the fair.

Special diet education should be made available to the ambulatory patient. Make arrangements to give the small business man, who has just discovered that he has diabetes and who feels that he cannot give up time to be completely hospitalized, the

opportunity to come to you at mealtime and have his meals with the proper instructions as to type and quantity. It will be a much appreciated service.

Most hospitals cannot have libraries. We have made arrangements with our local library so that we may have as many books as we desire to meet our needs. We try to find out from the patients what type of reading they like best, then send a messenger to the library with a note and soon we have some good pastime reading for the individual, and with only the cost of a little additional effort on our part. Further, make use of the newly passed postal regulations that allow your hospital to have turned over to it uncalled for, unclaimed periodicals at your postoffice. Here you will find a possible source of up-to-date literature for your readers.

Another practice that has grown up has been to weigh the babies for the mother without charge. So many feel that they cannot buy scales and yet would like to know how much the baby weighs. We send them over to the nurse in charge of the nursery who weighs them, always suggesting that they see their doctor as a matter of good health routine, and sends a slip to the family doctor that Mrs. So-and-So's baby weighs so much on a certain date. This seems like a little thing, yet to the fond mother it is a real service and ofttimes is the means whereby a baby gets additional medical service that it may need so badly.

The Small Hospital an Aid to Health Departments

We keep on hand a full supply of the vaccines as furnished by the State Health Department as well as the culture tubes, Widal outfits and sputum cups for the use of the medical profession, under the direction of the Board of Health. These supplies are available 24 hours of the day and the doctor finds it very convenient to know that at all times these are available and fresh, having been kept under refrigeration.

Another activity that the hospital performs is that of doing the milk testing for the city as the inspector brings the specimens in. Certain days are established for this work so that a large number can be run at a time; a small fee is charged. The hospital, again in another way, becomes a center for the rural population to look towards as a point of health activity.

We are finding, during these days of lessened occupancy, that there is a real desire on the part of parents and relatives to stay in the city during the illness of some of their family. It is quite easy to provide them with hotel facilities right in the hospital, and for us this has meant quite an increase in income with very little additional expense. It is always understood that such accommodations are cash and we have had no trouble on this account or losses in collections.

The large hospitals are becoming very much interested in small stores located therein. We may, in a small way, find some profit in the suggestion. We have, for a long time, sold baby soap to mothers. I am beginning to believe that a small show-case with nursing bottles, nipples, rubbing alcohol and such items would have considerable income possibilities. You will say that that would be competition for other stores; that is true, yet a hospital depends on money to sustain it and as such is a business institution and must look well to its sources of revenue.

We have organized the hospitals and the doctors in our community, to the extent that should a catastrophe take place we have a knowledge of the supplies that are available, and just which doctors will go to their stations at the hospitals while others will take care of the outside work, with one doctor looking after the agencies for supplying food. A first aid unit should always be available and you will find certain nurses who are more adaptable to this type of work whom you can contact should the situation demand such.

I have attempted to present to you a line of thought with practical applications that may serve to create many more suggestions. This business of serving our community is no little one and will grow if we become more conscious of the opportunities spread out before us. To get the most out of community contacts demands judgment, diplomacy and understanding. Clothed, as our hospitals are, with serious obligations, those who have the clearest vision will serve the best, for our hospitals are serving institutions. The goal to strive for is, to build a better, healthier and cleaner type of American citizenship through our institutions, which are representative of the finest in American life. As such we shall render real community service.

Dr. William A. Doeppers

Dr. William A. Doeppers, for many years superintendent of the Indianapolis City Hospital and recently with the Medical Research Department of Eli Lilly Company, died of cancer of the kidney December 9th, at his home in Indianapolis.

Dr. Doeppers was graduated from the Indiana University School of Medicine in 1916 and served his internship in St. Vincent's Hospital, Indianapolis. He served in the World's War with base hospital No. 110 at St. Nazaire, France. Returning home he served on the staffs of the Methodist and City hospitals in Indianapolis.

He was treasurer of the Indiana Medical Society, former president of the Indianapolis Hospital Association and former president of the Indiana Hospital Association.

The Cleveland Plan Grows Up

JOHN A. McNAMARA and MICHAEL A. KELLY

Director and Assistant Director, Cleveland Hospital Service Association

AFTER SIXTEEN MONTHS of presenting the Hospital Service Plan as outlined by the Cleveland Hospital Service Association, certain truths and certain ideals have inevitably come to the fore, and for the possible guidance of other cities that are contemplating similar plans we are taking the liberty of setting down these principles for what they may be worth.

Service plans if they are to be of any value whatever must be hospital-controlled, non-profit, built along the same lines of dignity as the medical profession and the administration of hospitals, and must, above all, be founded upon sound business principles if the plans are to endure.

Our Plan in Cleveland has now sixteen participating hospitals, all of them bound together in agreement and committed to the firm understanding that the Plan first is for the benefit of the community and secondly for the benefit of the hospitals. It is fully approved by the Cleveland Academy of Medicine which, through its two duly appointed representatives, has a voice in the policies and the management of the Association. The hospitals are represented by other members of the board and there are three members who represent the community at large.

Too much credit cannot be given to the Cleveland Hospital Council, to Dr. George Edward Follansbee and to Mr. John R. Mannix for the formulation of the Plan as it now stands. Because of the thought that was expended upon its founding and the ideals that were embodied in the document known as "The Inter-Hospital Agency Contract," the work that followed has been put on a much firmer basis and, while there were no special prospects in sight when we first began, we were strengthened by the sincere belief that the Plan that we had to present was one of merit and integrity, based upon practical ideas that needed only hard work and ingenuity with the employers of Cleveland.

Early in the work we discovered one sound principle that has governed our presentations of the Plan to groups ever since. We realized that first we were an association of hospitals and as such would be considered by the layman as representatives of the hospitals of Cleveland. This, of course, implied further that we represented to the same degree the medical profession of the city whose approval we proudly mentioned. As such representatives we had a distinct obligation; we could not at any time violate the confidence that had been placed in us and we resolved that the dignity that becomes the medical profession and the honor of our hospitals should be upheld by us at all times. Accordingly, we have stated time and again that we do not "sell" the Plan any more than a doctor sells his services or a hospital "peddles" its wares from door to door. We present the Plan to interested groups at the invitation of the employer and give to each employee an opportunity of taking advantage of our Plan. These statements have been openly laughed at by some hospital administrators in other cities who should know better but still seem to have an entirely confused idea of group hospitalization and the reasons for it.

Another point that must not be overlooked is that by insisting that we talk to all employees in any given organization, we are assured that the "story" of hospitals is told to each and every worker, and even those who do not subscribe to the Hospital Service Plan have a better understanding of just what can be expected in the way of a hospital bill.

A group hospitalization program installed by any community and properly administered gives the hospitals a closer working arrangement with industry and is bound to bring about a better understanding between the hospitals and the employee and employer alike.

Our Publicity

We have been careful of our publicity. Every article that is written for general publication, every folder and every other piece of information that is issued is first gone over by Dr. Follansbee so that at all times we are assured that nothing that would in any way embarrass the medical profession and place its ethics in a poor light will reach the public. We do not strive for great amounts of newspaper publicity and we are not interested in self-aggrandizement. We feel that certain amounts of publicity when there is actually something to tell to the community are beneficial and necessary, and by this method we have won the respect of the newspapers and have been taken out of the "pest" class, who daily make the life of a city editor a nightmare. Recently when we reported to our Board of Trustees on the progress of the Association, we sent to the managing editors of the three Cleveland papers

a copy of the report telling them it was for their information rather than for publication, but that if they thought there was merit in it as a news story, they were at liberty to use it. The results were excellent, particularly as we were not interested *per se* in receiving publicity. The Cleveland Press ran an unsolicited editorial as well as a news story.

We have, however, done considerable direct mail advertising to employers of more than 100 people and the results from this publicity have been excellent. We shall continue this type of work in one form or another.

Our Association is committed to collections through payroll deductions and nearly all of our accounts are now on that basis. The importance of this type of enrollment cannot be stressed too strongly. Handling subscribers as self-formed groups will lead to high collection and bookkeeping costs and will result in heavy cancellations, if the cities that have enrolled subscribers in this method are any barometer. In order to obtain wholehearted acceptance of the Plan by employees they must first have the assurance that their employer thinks well enough of the Plan to handle the payment on the payroll deduction method for them.

Since we started presenting the Hospital Service Plan we have held 1,228 meetings and explained the Plan to 52,000 employed people. These meetings, in most cases, result in an open discussion of the Plan by the employees and the answering by the representative of a large variety of questions. This total of 52,000 people represents about one-fifth of all the people in Cleveland that are employed by organizations employing ninety or more.

Since we started offering our Hospital Service Plan to the public at $7.20 and $9.00 per year, two other Cleveland organizations are selling a service which includes hospitalization, one organization selling medical service includes hospitalization for a 21-day period. They do not demand groups and will take either employed or unemployed individuals. Another health service offers hospitalization in addition to their medical service. Both of these organizations are highly unethical and are condemned by the Better Business Bureau, but nevertheless, they do tend to confuse the public.

We are continuing to secure additional subscribers at the rate of from 1,200 to 1,500 a month and feel confident that by January, 1937, we will have a total of close to 30,000 employed subscribers.

Our Growth and Development

Our growth and development have been most interesting. The rather cautious reception that the Plan met at the beginning; the gradual acceptance by such organizations as The Standard Oil of Ohio, The Cleveland Trust Company, and the Warner & Swasey Company; the first demonstration of the benefits of the Plan; the momentum gained about January 1, 1935, and the tremendous amount of effort and time in convincing employers of all kinds that they, as well as their workers, the community as well as the hospitals, are greatly helped by our Plan, have been the ingredients that have put our Plan past the experimentation stage and have made it the model for other plans in every part of the United States.

The following is a list of comparable cities where Plans have been presented for a year or more showing the rate of growth in these cities:

City	Started Presentation	Average Enrollment per year of Employed Subscrs., less canc's. (Subscrs.)	Total Employed Subscrs. Oct. 1st, 1935* (Subscrs.)
Cleveland, Ohio	Sept. 1, 1934	12,204	13,323
Dallas, Texas (Baylor Hos.)	Dec. 21, 1929	2,892	16,920
Sacramento, Calif.	July 15, 1932	1,896	6,000
New Orleans, La.	Feb. 24, 1934	6,836	11,000
Minneapolis and St. Paul, Minn.	July 1, 1933	3,600	8,000
Newark, N. J.	Jan. 1, 1933	2,484	6,800
Washington, D. C.	July, 1934	7,992	10,000
Durham, N. C.	November, 1933	3,792	7,254
Houston, Texas	January, 1933	2,796	7,700
San Antonio, Texas	February, 1931	1,464	6,800
Charleston, W. Va.	May, 1933	744	1,800

Indications of our usefulness come to us in every mail. Letters from subscribers who have been hospitalized containing such expressions as—

"Without the Hospital Service Plan I don't think I could have lived through the operation."

"Very few people are financially prepared for illness and I was among the number who couldn't afford to be in a hospital."

"I can scarcely find words to express my appreciation of your wonderful Hospital Service Plan and what it meant to me, a sudden illness and no funds to pay for it."

"It would have been a real hardship to have borne all the expense myself."

"I had no money at the time of my illness."

"Being a subscriber made things so smooth that I had no anxiety, which speeded my recovery."

"I have never received better returns on money invested."

"Freedom from worry over debts incurred at that time helped me to recover quickly and happily."

"I had no time to save funds in advance. If I had not been a subscriber I would have been very much worried."

"It was wonderful to be able to enter the hospital without red tape or worry and have the operation where otherwise I simply could not see how

*Figures quoted from report of Round Table on Group Hospitalization, American Hospital Association meeting, Jefferson Hotel, St. Louis, Mo., September 30, 1935.

I would be able to do so financially and then perhaps by waiting, become more ill."

"It would have been quite impossible for me to go to the hospital for my operation except for this help."

"No visiting Princess could have better care or attention than I did while in the hospital."

Our Subscribers Classified as to Type of Employment

During the month of October we added 1,427 new subscribers to the Plan and we renewed 973 additional. Our total number of subscribers as of November 25, 1935, less cancellations, was 16,212. These subscribers may be classified in the following order:

		Per Cent
Factory Workers	3,748	23
School Teachers	3,181	19½
Office Workers	2,907	18
City Employees	1,887	11½
Retail Store Clerks	1,245	7¾
Bank Employees	1,009	6¼
Government Employees	863	5½
Hospital Personnel and Nurses	665	4
University Employees	245	1½
Miscellaneous	476	3
Total	16,212	100

Up to date 74 per cent of our subscribers have chosen semi-private accommodations and 26 per cent have chosen ward accommodations. Up to November 30, 1935, the Association had paid the hospital bills for 898 subscribers, sending to the hospitals $41,200.50. All hospital bills are paid within the month they are received at our office.

Our Sales and Administrative Expense

An analysis of our sales and administrative expense and percentage of expense to sales shows the following:

	Sales*	Total Expense	%
July 1, to Dec. 31, 1934	$ 27,188.40	$ 6,933.12	25.5
Jan. 1 to Oct. 31, 1935	109,146.00	18,264.97	16.7

Our total administrative and sales expense is now running at the rate of $1.20 for a $7.20 annual ward contract, and $1.50 for a $9.00 semi-private contract.

Our Series "B" Plan or Family Member contract has only been in operation since September 15, 1935, which is not long enough to present any figures that would be indicative of how that Plan will eventually work.

Up to November 25, 1935, we had in force 1,674 Family Member contracts* and had paid the hospital bill for thirty-five to date, totaling $939.00. This amount represents one-half of the hospital bill for a maximum of twenty-one days, the patient paying the remaining one-half to the hospital direct.

After setting up a reserve of $6,000 and repaying our original financing loan of $7,500 to the Cleveland Welfare Federation, we have a total bank balance as of November 25, 1935, of $19,466.08, including the reserve.

Employers with a total of 154,000 people on the payroll are regularly contacted and negotiations with seventy-three new accounts have reached the point of conferences with executives and employee committees. After January 1, an additional drive will be started for employees in smaller organizations—those employed in groups of ninety or less.

Our books are audited every six months and starting in 1936 they will probably be audited every three months. We are building up useful statistics from our records that must be strictly accurate. We will not compile statistics simply for the sake of having pretty figures but will, we hope, have facts and figures that will help us to become a more useful organization in the community.

It is but natural that we have learned a little about industrial relations and hope to learn considerably more as the months roll on. Unless those responsible for the success of a Plan can gain knowledge of the problems that the employer faces with his workers—and the workers face with the employer—they will be greatly impeded in the presentation of the Plan.

Present-day relationship between employee and employer is on a vastly different plane than in the past. Changing conditions have brought about a much closer working arrangement and it is particularly significant that many of the large industrialists who have accepted the Hospital Service Plan are those who have a very pleasant relationship with their employees and have the city-wide reputation of being interested in their welfare. To the employer it means the solving of one more major problem of the employees without any cost to him. Any forward-thinking employer will readily see how perfectly the Hospital Service Plan fits in with his industrial relations program.

There seems to be no limit to well founded Plans. We in Cleveland feel that before many years the majority of hospital bills will be paid through the Service Association, that before many months every city in the State of Ohio will have similar plans and when these happy days arrive, the major problem of hospital financing will have been solved.

*Payments by subscribers to the Association covering the charge for these contracts are almost wholly paid on the monthly payroll deduction method with the exception of school teachers.

*The total sales of Family Member contracts amount to $7,331.40, which sum is in addition to the sales of Series "A" contracts.

Weighing the Hospital Laundry Problem

Establishing Facts in Relation to Where and How It Is Produced; and Fixing an Average Cost Necessary to Process It for Re-use

S. FRANK ROACH

Superintendent of Laundry, Medical Center, Jersey City, N. J.

WHEN we stop to consider the problem involved in furnishing an active general hospital with the laundry service required to meet all of its demands, we are confronted with a responsibility that embraces the setting aside of approximately twelve cents out of every dollar appropriated to operate the institution.

If we are hurried in our deliberation and arrive at the arbitrary figure of twelve per cent as the cost of this essential requirement of hospital operation; should we be satisfied with this as being sufficiently informative to tell us all we would like to know?

The writer believes not.

Therefore, to clarify the situation, he submits for consideration a survey made of how and where this cost is distributed, for further enlightenment.

The Three Factors Involved

To begin, there are three factors involved wherein this laundry volume has its origin and source.

True, the relationship among them is interwoven so closely that there is justification in believing that the term "Laundry" covers the situation. Such is not entirely the case, however.

Recognizing this, the readers may find some useful facts in this information to compensate them for the time spent in studying it.

The three factors of hospital laundry service heretofore mentioned are created by the following divisions:

First—The Direct Service; which is what the patient uses personally.

Second—The Indirect; which is used for the patient in the many demands of hospital technique and operation.

Third—The Semi-Direct; which is used exclusively by those attending the patient's general welfare.

We are thus furnished with a list, complete as to the origin of the hospital laundry service.

The Per Day Requirements of Direct Service

Now suppose we discuss from a per day foundation the first of these demands, that which the patient requires.

Instead of programming the complete classification of hospital patients' ailments in relation to how much of this service they require from a specific background and for the period selected, suppose for the sake of brevity we proceed to discuss it from an average viewpoint.

From a series of collective tests made in relation to this subject, it was found that the average amount of laundry service a patient requires was approximately seven pounds for twenty-four hours.

The basis for this conclusion was arrived at after a survey of the acute type surgical case and the convalescent patient, balancing one extreme against the other.

This service being used exclusively for the patients' body and bed requirements.

Indirect Service

Our next step of approach is to consider the Indirect Service. In this instance we are confronted by every related demand embraced in the broad field of hospital operation created by the patient's presence.

As an illustration and a measure of the consideration involved, we can cite the hand towel used by the visiting staff doctor on his entrance to make rounds as one factor, and carrying through to a major operation by a renowned specialist involving as much as one hundred pounds of service for a single case; all of which in the final analysis is caused and created by the patient.

While we have only scratched the surface of this Indirect Service in the above illustration made, we should remember that this complete service embraces other features of equal importance and of a more regular volume.

Such as the preparing and the serving of the food requirements, the in and out-patient clinics, the bedside medication and dressings involved, plus the general sanitary requirements also to be considered.

We have found in the tests heretofore mentioned, that this volume was equivalent to approximately one-half of the amount produced by the patient in Direct Service.

Semi-Direct Service

The Semi-Direct Service is more specific. While the patient is the foundation or direct cause of it, they have no relation whatsoever to the demand for or the use made of such service.

In other words, this feature deals with what is used by the entire hospital staff and personnel and relates to the uniform equipment worn and used by this element, plus the necessary laundry requirements embraced in either full or partial maintenance of this force.

Again we found a similar conclusion from our situation, which was that this total volume when divided by seven, the days in a week, was a trifle less than one-half of what was received from the average daily census of our patients.

Therefore, to establish and to suggest an amount to cover the complete laundry service of most any hospital of a general character, and taking into full consideration the three factors involved in this service and the relation they all maintain with one another, the fixed amount of thirteen pounds per patient, per day, will come very close to a final figure to estimate the daily volume that enters the laundry unit for processing.

True, many will find this figure at variance with their results.

If so, the difference may be due to a different policy and program of operation; or it may be caused by practicing either rigid economy or an extravagance brought into the situation from a pay-patient background where this cost for the most part is secondary.

But the fact remains, that this figure has been found to be a pretty fair criterion to consider, where no other data were present or had been established to cover this situation.

Having established the amount of service required per patient, per day, and the sub-divisions involved, let us consider the cost entailed in the processing of this requirement of hospital operation.

The Production Costs

In other words, our problem now becomes a study in the cost of our laundry units operation, and the variable features involved in complete production expense.

In this deliberation our guide is the aforesaid established figure of thirteen pounds per patient, and our census will regulate the total involved.

For sake of argument, suppose we assume that our problem is to handle a three hundred bed hospital from a laundry service demand, and the readers if interested and having a different set-up allow their judgment to travel up or down from the selected illustration to meet the selfsame problem confronting them, perhaps the reasoning to follow will materially assist in arriving at a satisfactory conclusion by this method of calculation.

In the specific instance chosen, we are confronted by a daily volume of 4,000 pounds in round figures, per day, to be processed.

Incidentally, if we subdivided this volume by accepted laundering method procedure, we will find that seventy-five per cent of it is classified as "Flat Work" requiring washing, extraction of excess moisture, and machine ironing and drying; fifteen to eighteen per cent is termed "Rough Dry" entailing washing, extraction and mechanical drying; and the remaining part represents what is called "Press or Hand Finished Work," after the demand involved for preparation is complied with.

This data and information are set up merely to acquaint the reader with the facts involved in regard to the separation required to process this amount for economy, and in relation to providing facilities to handle this problem advantageously.

From tests made in a number of hospital laundry units to determine the production possibility by weight, it has been found that two hundred pounds per employee, per day, is approximately the maximum to be expected and with a background of ultra modern mechanical contrivances to assist in this output.

That is from an average viewpoint, and from the ratio of the separation previously explained, so that in this instance the personnel required would be at least twenty persons, and more if confronted with the usual handicap and disturbances very common in the hospital laundry.

If we were to take the usual run of institutional employees of the hospital laundry predicated perhaps on the wages paid for this service, as compared with the higher wages paid in comparable commercial units, we seldom if ever can expect the same ratio of production output.

So that in all fairness to the individual held responsible for this supervision, a leeway should be accorded to take up the slack brought about by adverse conditions.

From a dollar and cent consideration of this production cost per pound, it has been found after giving due thought to the many related agencies involved in laundry operation, that those who have this responsibility of direction within the units' domain, and keep below the two cent per pound production cost, are as a rule doing a good job, notwithstanding any counter opinion that may be prevalent.

If by any chance this type hospital is carrying on

this requirement with a force less than that suggested as being sufficient, beyond any question we will find that either the driving policy or a program of false economy is the guiding spirit, and it is a foregone conclusion that the monthly replacement of personnel is very high and costly in the final analysis if considered from a fair and just viewpoint.

From this presentation it is hoped that any hospital administrator of an inquiring turn of mind, and most are especially in relation to their laundry problem, can by a little application of time make a critical survey of their units' operation, and arrive at a policy and program beneficial to all concerned.

This suggestion is made advisedly, because due allowance should be made to give general consideration to each and every factor having any relationship with or being the cause for misfit performance.

The final suggestion to cover this entire subject matter in order that we may have a harmonious background and foundation to operate by, relates to the amount of articles within this service; that is, the quantity in circulation, if this amount is equal to a five plus standard and all other features measure up to full requirements, the hospital superintendent may rest at ease that the hospital laundry problem has an absence of disturbing conditions.

The 1936 Institute for Hospital Administrators

The Association Committee having in charge the arrangements for the 1936 Institute, is preparing a course of study that will have a special appeal to those who register.

In the work of the Institute, the University of Chicago, the American Medical Association and the Chicago Hospital Association will cooperate with The American Hospital Association in conducting the Institute.

The Committee will bring leading hospital authorities of the United States and Canada to the Institute as lecturers on different phases of hospital administration.

A series of seminars, round table discussions and practical demonstration in hospitals will be scheduled.

As in former years the Institute will be held on the campus of the University of Chicago, in September, during the two weeks preceding the 1936 Convention in Cleveland, which opens on September 28.

Coming Meetings

CLEVELAND, OHIO

American Hospital Association, Sept. 28-Oct. 2
American Protestant Hospital Association, Sept. 26, 27, 28
American College of Hospital Administrators, Sept. 26, 27, 28
National Association of Nurse Anesthetists, Sept. 29, 30, Oct. 1
American Occupational Therapy Association, Sept. 29, 30, Oct. 1
Children's Hospital Association, Sept. 30, Oct. 1

Council on Medical Education and Hospitals, American Medical Association, Chicago, February 17-18.

American Hospital Association Conference of State and Province Presidents, Secretaries, and Chairmen of State Legislative Committees, Chicago, February 17-18.

New England Hospital Association, Boston, February 27-29.

Ohio Hospital Association, Columbus, April 14-16.

Joint Conference, North Carolina and Virginia Hospital Associations, Old Point Comfort, Va., April 16-17.

Association of California Hospitals, San Francisco, April 20-23.

Association of Western Hospitals, San Francisco, April 20-23.

Alabama Hospital Association, Montgomery, April 21.

Hospital Association of Pennsylvania, Pittsburgh, April 22-24.

Iowa Hospital Association, Des Moines, April 27-28.

Mississippi Hospital Association, Greenville, May 4.

Joint Conference, Illinois, Indiana, and Wisconsin Hospital Associations, Chicago, May 6-8.

American Medical Association, Kansas City, May 11-15.

Michigan Hospital Association, Grand Rapids, Second Week.

Minnesota Hospital Association, St. Paul, May 21-22.

Hospital Association of the State of New York, Buffalo, May 21-22.

New Jersey Hospital Association, Atlantic City, June 4-6.

Manitoba Hospital Association, June 25-26.

Connecticut Hospital Association, June.

Ontario Hospital Association, Toronto, October 19-23.

Kansas Hospital Association, McPherson, October 31.

American College of Surgeons, Philadelphia, October 19-23.

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EDITORIALS

— *HOSPITALS* —

The Journal of The American Hospital Association

In conformity with the plans for the orderly development of The American Hospital Association the Board of Trustees presents to the hospital field and to the Public the first issue of **Hospitals,** the Journal of The American Hospital Association.

In launching this publication the Board of Trustees has but one thought and one purpose: service to our hospitals and to the men and women who staff them.

Hospitals will endeavor to develop a service to all hospitals, and to all the friends of hospitals, that will aid them in making their institutions better, their patients happier and more efficiently taken care of, and their public more interested and more generous with their moral and material support.

It will be an "open forum" for the expression of the best thought in the hospital field. Its pages will always be open to constructive contributions coming from members of the Association and the public. It is the journal of the Association dedicated to the interests of the Association and to the interests of the regional, state and provincial organizations.

Its editorial council, who will guide its editorial policy, is composed of men and women long prominent in the hospital world. They bring to the new publication extended experience, sound judgment and personal values which round out a desired editorial organization in all of its completeness.

The title **"Hospitals"** has been chosen as inclusive of everything to which hospital service may pertain; it emphasizes its interest in every institution and its personnel without any qualifying adjective; it is intimate and personal, and brings to our membership not only a sense of possession but a pride in ownership.

The magazine itself will be attractive in appearance, well printed and well bound. The cover design expresses its purpose in a dignified and practical manner. A great deal of study was given to the selection of a type that can be read with most comfort and at the same time would make a typographically beautiful page. In stitching, binding and printing, the most improved methods have been employed.

Hospitals belongs to The American Hospital Association. Its members are its owners. It is in a very large sense their personal property, in which each member will have a definite personal interest. Its successful development will reflect the support not only of the Association membership, but of all who are interested in the growth and betterment of our institutions. It has been ethically founded and will be ethically conducted. It will advocate every good principle that will help our hospitals to prosper and become better. It will be quick to condemn those policies or projects which may at any time or in any way be harmful to our hospitals or their people.

* * *

Activities of the Joint Advisory Committee

THE Joint Committee of the American, Catholic, and Protestant Hospital Associations has pursued many successful activities during the past three years. While other committees of our Association have done excellent work in the development of standards and improved methods of hospital administration, the Joint Committee has had to do with the very existence of our voluntary hospitals, since

their maintenance and structure is being continually affected by federal legislation and regulations.

Due to the national policy, as announced, that there would be a minimum of federal legislation this coming year, the Joint Committee has determined that it would not be advisable to initiate any new hospital legislation. Its policy for the present will be to watch such federal legislation as may be proposed to see that it does not include any measures injurious to the welfare of hospitals, to encourage the inclusion of provisions in favor of hospitals, when possible, in legislation in the process of formation, to endeavor to secure interpretations favorable to hospitals from such bureaus as control the administration of federal laws affecting hospitals, and to keep in touch with all new regulations so that the interests of hospitals may be fully protected.

The Joint Committee will continue in its endeavor to secure the liberalization of the use of relief funds so that hospitalization of the indigent may be included, but this is now becoming the more particular duty of the state associations, due to the transfer of relief to the states, principally leaving matters affecting WPA workers and their families an activity of the Joint Committee.

It is the conclusion of the Committee that, if much is to be accomplished in this objective, the drive must start at home, with pressure being brought upon their Representatives and Senators by local hospitals, hospital councils, and state associations, in order to convince these men of the need for relief to hospitals. The presentation of the local need means much more than an appeal by a national committee. Full cooperation is requested of all.

The committee will encourage the passage of H.R. 9185, introduced by Representative Roy O. Woodruff of Michigan, which contains a provision whereby clinics operated not for profit will be permitted the use of tax-free alcohol in the compounding of products to be issued to patients for use off of the premises, but not offered for sale. This has passed the House and is in order for vote of the Senate early in January. State associations and local hospitals are urged to request the support of their Senators in favor of this measure.

The administration of the Social Security Bill will be followed in order to determine its effect on hospitals. It will be the obligation of state hospital associations to insure that the exemptions secured by the Joint Committee from the federal law are not omitted in state laws that will have to be drafted and passed in conformity with the federal law. There is the possibility of a separate classification being secured for hospitals, based on their individual experience to extend the benefits of the Social Security Act to employees of hospitals should this be desired. This will have to be given thorough study.

State associations are also advised that an advisory committee is to be appointed in each state in regard to the distribution of federal funds allotted to the states for rehabilitation of children and adults under the Social Security Act, and that every effort should be made to have a representative of the respective state associations on that committee in each state.

The legislative bulletins compiled by The American Hospital Association covering federal, state, and provincial legislation will be continued during the coming year and, as before, a resumé of all legislation under consideration will be sent to the chairmen of the state and provincial legislative committees and to such other sectional officers as may desire to receive them. The Joint Committee will endeavor to keep the hospital field, in general, fully informed, through our journal, **Hospitals,** of matters of interest, interpretations of federal acts, and regulations formulated in the administration of such acts.

* * *

Philanthropy and Hospitals

The responsibility for the care of the indigent sick has been placed upon the state, county, and city political divisions. Whether the cost of this care is borne by taxation, whether it is borne by the generous contributions of its philanthropic citizens, or by a combination of both, the hospitals—whether voluntary or tax-supported—must give thought in season to the encouragement of the active financial interest of the people of their communities.

Our hospitals will have to adopt as a continuing policy the encouragement of philanthropic gifts not only to maintain their buildings and equipment, but to assist them in their efforts to discharge their responsibilities to the sick poor.

The word "hospital" had its origin in charitable service rendered to those in need of shelter and care. Hospitals were originally supported by the philanthropy of religious orders as an expression of

Christian charity. They have through the centuries continued to be largely dependent on philanthropy for their existence. As society became more highly organized and the number of those who could or would make direct contributions became less and less, greater dependence was placed on the philanthropy of the few.

In general the state has assumed the burden of caring for the chronically indigent. But such provision has rarely been extended to the higher or the much larger middle economic groups. Indeed it has never been adequate for the indigent alone. For these groups the voluntary hospital has been the only refuge in times of sickness.

The cost of day-to-day care is all that voluntary hospitals have ever sought to collect from their patients, and due to the large number of patients who could pay but a part, if any, of this cost, the income from this source has never been sufficient and the philanthropy has been depended upon to bridge the gap.

However, day-to-day cost is but one part of the picture. Plants must be built, research must go on, alterations in buildings and equipment must be made to permit the translation of new scientific developments into bedside care for the individual patients. For these advances philanthropy has again been the foundation stone. Much as these advances have increased the daily costs of operation of the hospital they have lessened the duration of the patient's stay to such an extent that the total cost of his hospital care has not increased.

Fair income from endowments, generous benefactions and the increasingly popular community efforts, with a fair distribution of patients through the various economic groups, enabled the voluntary hospitals to survive without serious hazards so long as economic conditions were good.

But faced since 1930 with what the southern darky calls "de sting" the plight of the voluntary hospital has gone from bad to worse, and in spite of some apparent improvement in the last few months it is still precarious. Reserves have been depleted, buildings have deteriorated from lack of adequate maintenance and in some cases the capital of endowment funds has been jeopardized.

The altruistic traditions of the voluntary hospital prevent its refusal to those in acute need of its services, but it cannot defy the economic law that it must pay for the goods and services it consumes.

The voluntary hospital has no political instinct or beliefs. It exists merely as a beneficent mechanism for the care of the sick and for education and research. It cherishes the independence and self-respect which philanthropy does so much to provide.

Building Monuments

To every one who has the ability to acquire wealth there comes at some time the question, "What shall I do with my wealth? Shall I invest it in stocks and bonds, or shall I invest my funds in a place where they will yield perpetual dividends in repaired lives and the 'Healing of Humanity's Hurt'?"

Some twenty-five years ago, in the State of Texas, a great business man established a trust fund of $25,000, through one of the financial institutions of that State, to care for unfortunate children who were in need of hospitalization. The same year this man's brother, a great lover of beauty, gave $65,000 for the erection of a fountain to be placed in the center of that city.

All these years this beautiful fountain has poured out its life through its sparkling rays of crystal beauty for men, women, and children to enjoy and admire. It stands there today as one of the garden spots of the city. People come from far and wide to see it.

The trust fund of $25,000 draws interest at the rate of four and one-half per cent. Twice a year a certain hospital in that State receives a check for $550.

Contrast these two gifts. During the past twenty-five years, through the generosity of this great benefactor to humanity, this hospital has treated and cared for four hundred and ninety-two children who otherwise would have had to go through life maimed and helpless. These children have been restored to normal health again as a result of this gift. This fund is still intact, and will live on in perpetuity, continuing to bless humanity.

The man who gave the money for the fountain did a noble thing, but what consolation is the beautiful fountain to the poor, anxious mother whose child is dying for lack of medical care? What joy is this pool of water to the little unfortunate child who is unable to walk on account of his twisted limbs? What comfort can this fountain offer to suffering humanity when the shadow of death lurks near?

As a result of the gift of $25,000, hundreds of fathers and mothers have had their burdened hearts relieved. They have seen crippled limbs made strong again, diseased bodies restored to health, broken spirits soothed, heavy hearts ministered to in the name of Him whose mission was and is "Helping Humanity Lift the Load."

One of these givers saw beauty, but it was superficial; the other saw humanity's hurt, and it was genuine. One expressed himself through the heart of stone; the other expressed himself through the heart of humanity.

W. D. B.

Hospital Elevators

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Foreword

IT IS OUR PURPOSE to set forth as briefly as possible all pertinent considerations which are, or should be, influencing factors in making an intelligent analysis of the problem of hospital elevators.

The suggestions which follow represent not only the writer's personal thoughts but also those of various engineers and elevator manufacturers who have assisted, through suggestions, in compiling data hereinafter embodied.

Type of Intended Service

Before any elevator program can be set up, a detailed analysis of the service needs must be made. In other words, just what are the elevators to do?

In the great majority of cases simple local—i.e., floor to floor—service will be adequate. In this case the passenger elevators will handle visitors, patients, doctors and hospital personnel without distinction, except that patients will always be given preference. The service elevators will handle material, supplies, food service and the like. Stops will be made consecutively up and down the shafts at the various floors as required.

In the larger, and more complex institutions where classification and departmentization is more highly organized, other than local service may be desirable. Separate elevators for patients, visitors, doctors and hospital personnel may be indicated. Vertical transportation of food may be separated from that of other supplies.

Express service to upper floors, in buildings of ten stories or more, should be considered.

All these points must be studied, adopted or rejected; and a basic theory of service agreed upon before a satisfactory solution of the problem can be reached.

For the purposes of this article let us take as our typical case for study, that of a hospital of not over 150 beds carrying on a general medical, surgical and obstetrical service and housing no nurses or other hospital personnel within the hospital proper.

Number

No hard and fast rules as to the number of elevators can be laid down. The distance of travel from the farthest point on each floor to the elevators; the number of stories to be served; the type of food service in use in the hospital—e.g., transporting food trucks on elevators or tray service on dumb-waiters; the amount of daily visitors to the hospital; and like considerations will definitely influence the number of elevators to be installed.

As a general rule applicable to our "typical case," not less than two nor more than three elevators are needed. The inclusion of but two elevators means that one would be used for patients, visitors and doctors and the other for hospital personnel and food and supplies, which would congest the service at peak-load periods. Three elevators permit one to be used primarily for patients and doctors, one for visitors and hospital personnel, and one primarily for service use. Manifestly this gives a more flexible type of service, with better standby and peak-load capacity.

Location and Arrangement

Elevators should be centrally located with reference to the areas served. The required travel from the farthest point on each floor to the elevators should not exceed 100 feet. They should also be readily accessible to the visiting public on entering the building.

Elevators should be set in battery—i.e., grouped together—not only because such grouping makes an economical arrangement of elevator machines in a common penthouse (or basement machine room as the case may be), but it also permits the transfer of patients, supplies, etc., from one car—if stuck in a shaft—to another run up level with it. Another reason favoring elevators in battery is that it simplifies isolating the elevators at one point on each floor; a highly desirable thing to do.

Traffic

Elevators, as potential—and in many cases actual—noise centers should never open on a main corridor, but should open on their own lobby or private corridor which is cut off from main corridors by doors. A very desirable arrangement is one where two elevators open onto one lobby and a third opens onto a private or service corridor running behind the first two elevators and on both sides of all three, thus forming a by-pass around the elevator battery and connecting into the main corridor.

Lifting Capacity and Speed

The load capacity of any elevator will be governed by the car size and the nature of the service requirements. Lifting capacity and speed are definite cost factors of an elevator installation and it is wasteful to design for greater loads or higher speeds than required. As a general rule the load-carrying capacities required need not exceed 4,000 pounds each for service and 2,500 pounds each for other elevators; these loads being in addition to the weights of platform and cabs.

Except for express service—where speeds of 600 feet per minute are not now uncommon—high speed elevators are uneconomical, because—where the travel is frequently floor by floor and numerous stops are made—an elevator will not have reached its maximum speed before a slow down and stop becomes necessary. It is not meant by this that low-speed elevators are advocated, far from it, for few things are more irritating than a slow-speed elevator. Speeds ranging between a minimum of 200 and maximum of 400 feet per minute—for both service and other elevators—should prove satisfactory and economical.

Cab Size and Design

The elevator cab should be of sufficient floor area to accommodate a patient on a stretcher, two attendants, and one elevator operator. A clear inside cab dimension of 5 feet by 8 feet—with the larger dimension running from front to rear—has proven adequate and economical.

Cab designs are legion, but the substantial enameled steel cab of plain design seems preferable from a service standpoint and—through the use of tasteful color combinations—not unattractive in appearance. The upper portion of the cab should be provided with metal ventilating grilles around the back and sides. A bronze or white metal base not less than 8 inches high should be carried around the two sides and back of the cab at the floor line. A hand or guard-rail of flat bronze or white metal bars should be installed around the back and sides of the cab and set at the same height as the top of a stretcher. In the side of the cab adjacent to the other elevator provide an exit door so arranged as to permit transfer of persons or supplies from one car to another alongside of it. The section of hand-rail in front of this exit door should, of course, be made removable.

All interior angles at floors, walls, and ceilings should be rounded for sanitary reasons. Cab floors should be of some long-lived, permanently resilient type of flooring material cemented to the car platform.

Elevator Engine

Where direct current is available the elevator machine will, of course, be a direct current machine. When alternating current only is available, a choice of machines must be made. Either a regular two-speed alternating current machine may be used or, preferably, an auxiliary motor generator set may be installed with the elevator machine which will convert the alternating current to direct current for the elevator machine. The use of direct current—either through the motor generator set or directly from the feed lines—will produce a job which will operate more quietly and smoothly than will a two-speed alternating current installation although the latter is the cheaper.

Where funds permit, the inclusion of the motor generator set for both direct or alternating current machines is to be preferred, however, as this will give the maximum flexibility and smoothest acceleration and retardation in operation.

The single-wrap traction type machine—either geared or gearless as the case demands—should be used. Geared machines will prove adequate in all cases except where the non-stop travel is more than ten stories and high-speed express service is contemplated.

The engine should be of such size, and so geared —or otherwise arranged—as to easily meet its specified service requirements of speed and lifting capacity without overheating or laboring.

The bearings at the principal points of wear may be either babbitted metal or ball-bearings.

Safety Features

The National Elevator Code, and nearly every building code, specifically requires adequate safety features to properly protect elevator users. These are so well known that it is scarcely necessary to do more than list them here. They are—

Automatic brake on engine—speed governor and safety on car to act in the event the supporting cables break. Oil, or spring, buffers (preferably the former) to eliminate shock if the car runs below its lowest stop. Limit switches which cut off the power and stop the car if it runs above its topmost stop. Interlocks on all shaft doors—and sometimes on car doors or gates as well—which prevent any door being opened until the car is opposite the opening and will also render the car inoperative until shaft doors are closed.

Types of Control

Until the advent of the automatic elevator there was but one type of control, i.e., the car switch handled by a human operator in the car. The invention and subsequent development of the automatic elevator has made available a wide choice of

various types of control offered under all sorts of names which describe—or attempt to describe—the type of car operation under the particularly-named control system. These various terms, such as "signal control," "full automatic control," "collective push-button control," etc., have been rather loosely used and the same term has come to have different meanings to different people, sometimes resulting in bitter disappointment to the buyer due entirely to a misinterpretation of the phrases describing control.

To eliminate this, we suggest that the problem be considered solely from the angle of "what you want your elevators to do." Never mind the name of the system. Stick to the question of how your cars shall be controlled so that they operate as you want them to.

As a general rule the automatic control system, which most nearly equals the human operator on the car, will most nearly meet all requirements. Such systems are available and nearly any modification can be made provided the specific requirements of operation are made clear.

The writer's personal preference is for a control system which permits the car to be operated either by an attendant in the car or automatically by merely turning a key-controlled lock switch in the car. The advantage of such dual type of control is that it permits the posting of an attendant on the car during visiting hours, when people unfamiliar with automatic elevator operation will be using the elevators, and at other times will release the attendant for other work and the elevators can then be switched over to function automatically for use by hospital personnel who understand their mode of operation.

Levelling

Levelling of hospital elevators is extremely important in order to eliminate the tripping hazard at landings and to permit the smooth movement of wheeled conveyances on and off the elevators.

All elevators should be guaranteed to make level stops within not more than ½ inch of the landing levels.

Shaft and Car Doors

The clear opening width to any elevator should be not less than three feet, nine inches.

Solid flush doors, of kalomein or hollow metal construction, should be provided at all shaft openings, and, preferably, on all cabs. Doors on cabs, which are made possible by automatic operation, are particularly desirable for hospital elevators not only because they fully protect the occupants in the car from coming into contact with any part of the stationary structure while the elevator is in motion, but also they are preferable to a gate because they eliminate the hazard of having hands or feet caught and injured.

Both shaft and cab doors should be of good substantial construction and should be hung on heavy pattern tracks and hangers designed to operate smoothly and practically without noise or friction. Guide grooves in sills should be milled smooth and guide strips in door bottoms should be of lignumvitae or fiber composition to eliminate noise in operation.

Where elevators are kept busy, power operators should be used for both shaft and cab doors. This power operation should consist of a single electric motor-operated mechanism on the car which will operate both shaft and cab doors at every stop. Power operators when used should be under the control of, and require the presence of, an attendant in the car.

Dial indicators on the hall side of doors, and—where solid panel doors are used—position indicators in the cabs should be included.

Machine Room

The elevator machine room should be of an ample size to permit proper location of engines, generator sets, control panels, etc., with sufficient space around them to permit proper servicing, repair and replacements of various items if and when required. The machine room must also be well ventilated to prevent overheating of motors under peak-load service.

All motors, engines and — especially — control panels should be mounted on sound-absorbing bases and isolated from the building construction to prevent noise transmission through the building structure with consequent disturbance to the occupants. An acoustical treatment of the machine room to absorb reverberation within the room is desirable but is of secondary importance to the proper isolating of the equipment referred to above.

Conclusion

In conclusion let me again stress the importance of purchasing the best elevator equipment available for the particular service demands. This does not imply outright extravagance, nor is it a recommendation to include every gadget possible in connection with an elevator installation. What is meant is simply this—that—having determined your requirements; and having made up your mind what you want your elevators to do; stick to your program and spend the money necessary to secure equipment that will adequately and continuously meet its service demands.

No so-called "economy" is more futile than purchasing a cheap "almost as good" elevator.

The Role of the Hospital

In the Education of Doctors, Nurses and Others Engaged in the Care of the Sick

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IT HAS been said that every human relationship has its problems, its possibilities of misunderstandings and conflict, and its needs for mutual adjustment. So it is with the relationship between the public and the personnel in the hospitals who care for their sick. A wrong impression can only be corrected through a better understanding of the problems which confront an institution. Therefore, a plan of instruction should be instituted throughout the entire hospital personnel with this idea in view. The hospital, viewed from its human side, consists of the medical personnel, the nursing personnel, the dietary personnel, the housekeeping personnel and those connected with its financial department.

The financial condition of the hospital is extremely important to those directly concerned with its maintenance and the welfare of the patients entrusted to their care, but it is lightly regarded by the public who still believe that the cost of illness is too high. To educate the people to assume a financial responsibility for illness, may become increasingly difficult, since the Federal Government, as a temporary measure, has supplied the "necessities of life" to unemployed needy citizens, but usually left them stranded upon the hospital doorstep when the disaster of illness overtook them. Our hospitals have met the emergency without reimbursement, but is it not safe to assume that many of those people will never expect to pay their future hospital bills? Important as the financial department is, still it is not a paramount factor to the individual patient, his illness and his reactions to his surroundings are the all-important items.

The housekeeping personnel, made up of the janitors, window washers, maids, sewing women, laundry workers, plays an important part in the hospital's environment. With the exception of the executive housekeeper and head laundryman, they are probably the group of workers with the lowest educational background. The housekeeping maids come in daily contact with the patients, who frequently ask them for service. Sick people do not readily distinguish the difference in personnel; therefore, too much care cannot be used in their selection and instruction.

The custom long followed by many hospitals of employing middle aged and sometimes even elderly, broken-down men and women for their housekeeping, is to be deplored. Dr. Haven Emerson, an eminent health authority, states that "there are only three groups of people who can be taught. First, the very young; second, mothers with babies, and third, those who are ill." The hospital's educational program must begin with the housekeeping group, who should be young people of twenty or more years, who radiate health and enthusiasm. They are more receptive to suggestion, more teachable, lighter on their feet, move about more quickly and accomplish their work with greater dispatch and less fatigue.

The Educational Opportunities of the Hospital

A well-defined program of instruction, which teaches them not only how to do their work to the best advantage but also its value as a health measure, is important, for what applies to the most remote factor in so far as education is concerned, applies equally as well to the closest factor; namely, the environment which surrounds the patient. They should be neatly uniformed and taught how to conduct themselves in the sickroom, as well as the value of cooperation and loyalty to those with whom they work. This department offers a fertile educational opportunity which, if developed, should prove so valuable that hotels, clubs and allied places would regard our hospitals as the best training field for the housekeeping personnel of the future.

The dietary personnel is our next consideration. The larger hospital has an administrative dietitian, who has one or more assistants, while a single dietitian serves the smaller hospital. Each has a retinue of maids, bus-boys, cooks and assistants for whom they are responsible to carry on the work of the department. Here, again, an attractively uniformed group produces a better psychological effect on the patient. The value and importance of the food service cannot be overestimated. It is remembered

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by the patient long after his dismissal and looms higher than any other one thing in creating a pleasant or unpleasant memory of hospital experience. There are many varieties of food service, varying from that served in our best resort hotels, restaurants and tea rooms, to that served at the cheap lunch counter or drug store. These all cater to well people, who choose their eating place and order what they desire or can afford to purchase. The hospital picture is quite different; it caters to sick people with jaded appetities, who often desire food that they cannot have, and at the same time, caters to a large family of well people whose board is a part of their remuneration, but who have no choice in its selection. To attempt to satisfy people from so many walks of life is a sizable problem in itself, and where the patients are concerned, requires continuous systematic teaching and follow up. These employees should be taught many of the things that are presented to the housekeeping group, stressing health and personal hygiene. This must be supplemented by teaching tray set-up and food serving —unless this is done by the nursing department— and how to approach the patient with his tray. Dietary departments not only see that the food is served, but the dietitian teaches the special diet patients and members of their family how to compute, weigh and prepare the prescribed therapeutic diet, while other patients are often helped to acquire better food habits.

The personnel of a large hospital is comparable to a small community. That institution whose well-balanced, low cost menus appeal to its employees, is carrying on a constructive program of education which not only teaches the employee himself, but later has a far reaching effect on his family and throughout the community. This teaching also includes the student dietitian, serving her internship in the hospital, the student nurses, and the interns who frequently seek advice in dietary problems.

The Education of the Nursing Personnel

Now, we shall turn our attention to the nursing personnel, whose service is often referred to as "the backbone of the hospital." Attendants, orderlies, student nurses, head nurses, supervisors, the educational director and the assistants must all be coordinated into this one service by the director of nursing. The earliest school of nursing in this country was developed only a little more than seventy years ago and a decade of years elapsed before the next school was started. It is well within this century that the rapid growth in the number of schools of nursing has taken place, and we have become accustomed to thinking that all the nursing service in a hospital should be done by student nurses.

The motive in establishing nursing schools so that the sick might have more efficient care, was excellent, and nursing became one of the early forms of vocational education for women in this country. Dr. May Ayres Burgess' book, "Nurses, Patients, and Pocketbooks," tells us that the pioneer nurses were not as interested in establishing and promoting education as they were in demonstrating that skilled nursing care was better for the sick than unskilled care. There seemed to have been little thought given to the supplementary teaching necessary to prepare women for future nursing activities. There has been a gradual process of evolution, each succeeding group of nursing leaders appreciating that more and better preparation was necessary if nurses were to intelligently meet the increasing demands made upon them by the medical profession.

The educational level of the country has risen rapidly within two generations, and instead of the mature women of good judgment in our early schools of nursing, today we find eighteen to twenty-one year old young women—who have been selected for their health, intelligence, poise and personality giving excellent nursing care to our patients.

In order for nursing to keep pace with the advances in medical science, it is imperative that nurses have a good academic background upon which to build their professional education. The curriculum offered should be acceptable for credit to universities and colleges. In educational centers, a direct affiliation with the university or college should be made whenever possible and degrees given in these courses, or for this work.

Extra curricula activities, such as glee club work, student orchestras, and some type of sport or games are available in the accepted school to the students of the present day. In the cooperative type of government, either controlled by the students themselves, or in combination with the advice of the faculty, there is educational value.

This "changing era" of nursing education has reduced the number of students in many schools, and necessitated the employment of graduate nurses for general duty. Many of them, though excellent nurses, cannot meet today's requirements and are seeking extension work. This makes their daily routine more interesting and widens their opportunity for the future. It, also, makes them better fitted for tactfully handling social situations. The viewpoint of the laity, that any girl not fitted for other work could enter nursing, is rapidly changing. They now appreciate that nursing requires young women of high intelligence and integrity. The contribution which a well-prepared nurse makes in the community's health program cannot be estimated.

The Importance of a Well-balanced Program

If it is important that nurses should have a well-balanced educational program in the science and art of nursing procedures in order to give intelligent nursing care, how much more important is it that the interns, who complete their medical training in the hospitals and become the physicians of tomorrow, should be closely supervised and taught. They come to us with a well-rounded theoretical course to gain the clinical experience necessary to put it into actual practice. They are young, ambitious and eager for further knowledge, and are willing to work hard in order to obtain it. Responsibility for their training must be assumed by the medical personnel of the hospital, by both full-time and visiting staff. The pathologist, the roentgenologist, the physical therapist and the executive committee of the staff, together with the hospital administrator, all have an educational responsibility to the interns. They should make an effort to see that every available opportunity is used.

The time of the intern is usually arranged by offering a rotating type of service, which gives the intern experience in each division of the hospital. It also affords him an opportunity of working with the entire group of attending men during his term in the hospital.

The Education of the Intern

The intern committee assumes responsibility for the instruction given this group, and it is arranged for in various ways. Some hospitals offer regular class and seminar work; some have occasional class or discussion group privileges and ward walks for the intern. Others permit the interns to invite a staff man in to luncheon daily, at which time he discusses and reviews interesting cases in the hospital with them. Nearly all hospitals offering intern service provide the monthly staff meeting opportunity and may have regular pathological conferences as well, in which the intern may present some of the subject material. Of course, all these plans are desirable, but they do not take the place of the daily systematic teaching of the attending man, who explains the treatment used step by step, while following the case from its beginning through to its conclusion, and takes time to check his physical findings and point out mistakes.

The intern is the link between the nursing staff and the attending physician and represents him in any emergency arising during his absence. He may even be called upon to direct the course of procedure to be followed, thereby contributing to the education of the nursing personnel.

All attending staff men are teachers by example and wield an influence which remains with the nursing staff as well as with the intern group. They weave the pattern to be followed in the practice of medicine for the future generation. Therefore, every staff member should regard it not only a duty but a privilege to be coveted, when young men seek the opportunity of lighting their candle at his field of knowledge.

It may be that a new educational system will be evolved as a result of a plan in use at Temple University School of Medicine. In addition to the professor working up the subject material and presenting it to the class, each member is given the examination questions for the course. At the end of the year, the student turns in his answers. He can acquire information from any source, but must give his references for all facts. This constitutes his examination as well as a textbook for future reference. Perhaps such a plan might well replace the common method of final examination, with its cramming and haphazard results.

In the present day system of educating doctors, nurses and others in the care of the sick, the hospital is the hub; its various departments are the spokes and the circumference of the wheel of progress is set by the vision of its attending staff. The hospital is offering to the nurse and intern better educational facilities, but the primary object is to give better service to the patient. Whatever improves the training of the hospital personnel means better service to the patient who is, after all, the hub of the wheel around which all parts of the hospital revolve.

Hospitalization in Chile

During the year 1934, 253,318 patients were admitted to the hospitals in Chile, compared to 235,717 in 1933 and 106,217 in 1911. The number of hospitals has increased from 98 in 1911 to 144 in 1933, and 155 in 1934, and the number of hospital beds has increased from 10,566 (3.1) in 1911 to 17,306 (3.9) in 1933, and 18,293 (4.1) per thousand inhabitants.

The efficiency of hospital care in Chile has been noticeably better, and the length of stay in hospitals has decreased from 24 days per patient's stay to 20. The percentage of hospital deaths has decreased from 9.2 in 1912 to 7.2 in 1913, and 6.7 in 1930, but the cost of hospital stay per patient has increased from 73 pesos in 1911 to 203 in 1933, and 224 pesos in 1934.

Autopsies—Funeral Directors—and More Autopsies

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I. *The Analytical Balance*

THE bases upon which the quality of a hospital is judged are protean. The general public takes note of the architecture of the main entrance, is more or less displeased with the visiting hour regulations, and retells with embellishments the disagreeable—occasionally the agreeable—contacts its friends and relatives have experienced as patients. The patients themselves remember the disposition of the admitting officer, feel the exact degree of sincerity behind the smile of the head nurse and the conscious professionalism of the house officer, and comment without reserve about "institutional food." The professional staff comments on the records if there are interns to write them, gives personal illustrations to show the economic harm done by the system of admission to the out-patient department, and criticizes the administrative officer for not keeping the hospital's equipment in its pristine glory. The trustees scan the annual report stopping at that page of figures which generally should be printed in red ink. Undertakers mutter about unsigned death certificates and the stumps of what were once nice long carotid arteries.

Now the alert hospital superintendent gives ear, though at times a weary and calloused one, to each of these groups. He paints the front entrance, approves the bill for ice cream on Sunday noon, replaces countless glass objects "broken in boiling," presents the trustees with a budget that can but reveal its true shape in spite of heroic stays, and—well, just what does he do for the undertakers?

At the outset, before having thought to do much of anything for the undertakers, he appreciates the value and importance of autopsies. A good physician never hesitates to face his failures and mistakes frankly in an effort to profit thereby. At best, the death of a patient means a failure (failure to save life) though perhaps an inevitable failure. At the autopsy table, the hospital staff has an unexcelled opportunity to study in retrospect the problem with which a losing fight has been waged. Clinical signs and symptoms can be integrated with anatomical findings to give greater keenness to the interpretation of similar signs and symptoms at the bedside of subsequent patients. Very often entirely unexpected pathology is revealed during the course of an autopsy. The careful, methodical recording of all details of every post-mortem examination builds up for the hospital a mass of scientifically interpreted facts of such depth that later research students may never wholly exhaust its potential value to pure and to applied science.

Of still closer interest to the relatives who grant permission for an anatomical examination is the ascertaining of the cause of death in connection with insurance and legal affairs. Occasionally an autopsy reveals the presence of some hereditary or congenital disease, knowledge of which may aid the family physician in later service to surviving members of the family. This point is coming more and more to the foreground as the prophylactic side of the practice of medicine is emphasized.

It is little wonder, therefore, that the hospital superintendent looks carefully to the percentage of autopsies which are obtained on patients dying in his institution. He provides as good a pathological department as can be assembled within his means, and then supports that department with personal interest. He works for harmony among the members of the professional staff in order that knowledge—not personal criticism—results from autopsy findings. He promulgates the rule that the relatives of every fatal case, excepting, of course, medico-legal deaths, shall be approached on the question of granting a post-mortem examination. This rule should be inflexible, and should apply to the private as well as to the public ward. And finally, he gives consideration to the undertaker. His ways and means, methods and techniques of doing this form the framework for this paper.

In order to illuminate this framework, the procedures current at the Peter Bent Brigham Hospital in Boston are now to be brought into focus one by one. It is not to be supposed that these procedures represent perfection. They do, however, represent the present state of a program which is being shaped by the combined efforts of the hospital staff and an increasing number of local funeral directors.

II. *The Rider on the Balance Beam*

When the decision as to the performance of an autopsy is in the balance, the funeral director is truly the rider on the balance beam. If the scale tips sharply, the rider is too light to avail against it. As more weights are added, the swings of the indicator often show the necessity of using the delicate influence of the rider in order to establish equilibrium. To handle the insignificant looking rider on the balance beam, however, requires a nice touch and studied patience. The rider is very sensitive and plays his part only when thoughtfully protected.

Cooperation between hospital authorities and funeral directors in the matter of anatomical examinations must be based on a friendly respect each for the other. Perfection is yet to be attained by each side, but each can find in the other ample reasons for professional respect. The old-fashioned undertaker was perhaps mainly a salesman of pine-boxes. The up-to-date funeral director—the term is of his own choosing—has added the professional service of embalming to his sale of most elaborate caskets. Moreover, he actually gives many a bereaved family a type of spiritual comfort akin to yet different from that offered by the clergy.

The hospital administrator has a helpful friend in the person of the enlightened funeral director. It pays to call in person on the leading funeral directors of one's community. Arrange to have the younger members of the hospital's pathological department watch the embalming of a normal and of an autopsied body. Grasp every opportunity to speak before meetings of funeral directors on the mutual problems arising from the autopsy question. Whenever a complaint is made by a funeral director against the hospital, investigate the matter speedily, thoroughly, and thoughtfully. Review the steps taken in handling the body of a deceased patient from the moment of death to the disappearance of the body into the undertaker's wicker basket.

In laying out a body, the nurse and orderly should be instructed along the lines of a rigid routine. The fewer things done, the better, for so often the embalmer must later undo, if possible, procedures done blindly although with good intentions. If the mouth is kept closed by a tight bandage placed under the chin and tied on top of the head, marks will probably be left in the skin which cannot be removed and which cause unpleasant comments at the expense of the funeral director on the day of burial. A roll of soft bandage placed on end between the chin and the suprasternal notch of the sternum solves this problem. A very thin layer of vaseline spread over the face and lips and hands prevent undue drying. Artificial dentures should be replaced in the mouth only when such replacement can be done easily without marking the lips or distorting the mouth. The head and shoulders should be kept elevated constantly to prevent discoloring the face from circulatory stasis.

The following excerpt from the "General Procedure Precedent Book" of the Peter Bent Brigham Hospital shows the actual steps taken by the nurses in laying out a body:

Purpose

1. To have the body clean, straight, and in proper condition for delivering to the morgue.
2. To care for the patient's possessions, so that their safety is assured.

Routine of Discharge

1. A nurse can take no steps toward the preparation of the body until the patient is pronounced dead by the doctor. (Written in the order book.)
2. As soon as the discharge has been written, the Front must be notified immediately by telephone.
3. Complete the data on the bedside card, and take to Front at once, carrying out the usual routine for a discharge.
4. Valuables must be delivered to the friends or relatives, but must be listed in the usual way, placed in an envelope marked as usual and in addition "Discharged to Ward X" and delivered to the cashier's office.

Care of the Body

Equipment

Post-mortem box containing clean sheet, shroud, stockings, bandage, picked cotton, safety pins, clothes tags, throat sticks, orangewood stick, adhesive if there is a surgical wound, equipment for bathing patient.

Procedure

1. Take equipment to bedside.
2. Place the body in a horizontal position, with head and shoulders elevated on 2 pillows.
3. Straighten the extremities.
4. Insert false teeth, if any, and close mouth.
5. Close the eyes, using thin layer of cotton under lids if necessary.
6. Remove all top bedding except the sheet.
7. Comb hair, and if hair is long, braid in two braids and tie with bandage.
8. Bathe the entire body, leaving the back, buttocks and perineum until last.
9. Arrange a dry and clean area under the body while turned on the side.
10. While body is still on its side, pack rectum with picked cotton, and place diaper under buttocks well padded with cotton.

11. At the same time, apply one sleeve of shroud like a shirt.
12. Place clean sheet under body, extending 12 inches above the head.
13. Turn patient on back, adjust and pin diaper. Complete application of shroud and draw the clean sheet through.
14. Put on stockings, and tie ankles and knees together with double thicknesses of bandage.
15. Tie bandage loosely on wrist. Write 4 tags as follows:
    a. Name — ward — date — time — friends —present or absent. Attach first tag to wrist bandage.
16. Fold arms across the chest and pin sleeves to body of shroud.
17. Remove sheet covering body.
18. Wrap the clean sheet under the body about the body and pin from chin to feet.
19. Apply thin coat of vaseline to face, and fold sheet over face.
20. Attach second tag to outside of sheet.

Care of Clothes

Procedure

1. Transfer clothes from locker to ward.
2. Check clothes with list, and include all articles in bedside table, toilet articles, etc., and enter each on the list.
3. Wrap neatly in bundle.
4. Tag with third tag. (If more than one bundle, tag each bundle.)
5. Place duplicate clothes list (returned from cashier's office) in manila envelope, and pin to outside of bundle.
6. Sign list in clothes book in place provided, and mark "Discharged to Ward X."

Transfer of Body to the Morgue

Procedure

1. Prepare wheel stretcher with military blanket.
2. Place body on wheel stretcher and wrap blanket over body.
3. Place clothing at foot of stretcher.
4. Close doors leading to corridor, have a clear thoroughfare, and the elevator on proper floor level.
5. Take body to morgue, and carry the fourth tag, 3-inch roll of bandage, and safety pins.
6. Place body in compartment provided for the purpose.
7. Turn sheet back from face and elevate head on head block. Place roll of bandage under chin for support.
8. Cover face, and pin sheet loosely.
9. Place clothing in compartment with body. Close and attach fourth tag to outside of door.
10. Return to ward.
11. Restock the post-mortem box, and place list of articles needed on head nurse's desk.
12. Clean room and furniture in usual way for discharge of patient.

The approach to the nearest relative of the deceased for the purpose of obtaining written permission for an autopsy is best left to the doctor who has been directly in charge of the patient—on the public ward, the senior house officer is this person—on the private ward, it is the visiting physician himself. The longer the space of time during which the physician has known the patient's relatives, the better are his chances for winning their confidence and the post-mortem.

The person who actually signs the permission for an autopsy must be the nearest relative of the deceased. The marital partner is considered the closest relative, even though the couple be living apart. Legalized divorce, however, cancels this relationship. Parents are next in order, the dissent of either one being sufficient to forbid the examination. Then come those children of the deceased who are of legal age, all such children having an equal voice. Unanimous consent is necessary, although generally the signature of the eldest is taken as sufficient. Then come the siblings, among whom the same rules of equality and uanimity hold as with the offspring. If the deceased has no relatives falling in the above mentioned classes, one looks to whoever may be the nearest relative, or friend, usually selecting the person who is taking charge of the remains and paying for the funeral. In spite of these rules of priority, it is safest not to perform an autopsy if any near relative is definitely and openly opposed. In a hospital, every signed autopsy permit should be reviewed invariably by the superintendent or his deputy and countersigned by him before any move is made to actually start the examination.

A sense of esthetic sensibilities, as well as the obvious need for discretion, makes it unnecessary to describe an autopsy in detail to the family. On the other hand, deceit and lying are no more excusable here than elsewhere in a physician's dealings with his patients. The term "customary post-mortem examination" may be used to mean the usual complete autopsy, including the head, with the removal of all organs and the filling of the shell with sawdust together with, if indicated, the removal of such portions of the long bones and their joints as may be essential to complete the pathological demonstration. If the family requests that the external incision be limited, the specifications should be rigidly adhered to, only such organs being removed

as the incision reasonably permits. The limiting of the incision to the abdomen, however, would not appear to prohibit cutting through the diaphragm, for the person granting permission with such a restriction is evidently considering the length of the external incision rather than the cutting of an internal muscle. If the examination as well as the incision be limited to the abdomen, the matter is quite different and the diaphragm stands as an impassable barrier. If the permission as obtained specifies that the organs are to be replaced, this should be done with as close regard for normal anatomical position as possible. This type of permission is always unsatisfactory spiritually, for one can but feel that the person granting permission for an autopsy with this restriction hopes for no more extensive mutilation than experienced during a surgical operation. Equally unsatisfactory is the permission which requests that the organs be not removed. Such restricted examinations result in conditions which add distinctly to the work of the embalmer in spite of the pathologist's willingness to cooperate.

In setting the time for doing an autopsy, the embalmer's convenience should have paramount consideration. The funeral director deserves this cooperation, even if it means doing the examination during night hours or when social engagements lure the pathologists to other fields.

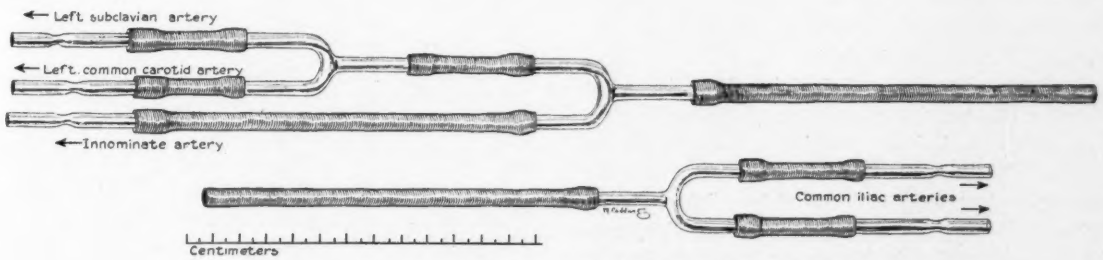
The body incision made at the autopsy should be of the Y-type, starting from each anterior axillary fold and going forward below the breasts (in males as well as in females) to meet in the midline and then extending downward to the symphysis pubis. Rigid adherence to this type of incision pays. So does rigid adherence to that type of scalp incision which starts behind each ear and passes over the top of the head at, or just posterior to, the occiput.

In sawing out the calvarium, it is helpful to leave a one inch long, V-shaped projection at the rear. In reconstructing the head, this tongue fits into the notch produced when it was cut out and greatly reduces the danger of the calvarium slipping and marking the skin over the forehead and temples.

As already indicated, all organs should be permanently removed, unless the permission for the autopsy contains some restriction to the contrary. This, together with the use of dry, clean sawdust for packing the body cavity, gives the skillful embalmer ideal conditions for his work. The arteries at the base of the brain should be securely tied. Whether or not plaster of Paris is spread over these arteries depends upon the local embalmers. In Boston, the majority of embalmers have expressed a desire not to have plaster used. It, therefore, is better in this locality to leave the plaster out; for those embalmers who do wish to use it can put it in much more readily than those who do not want it can chisel it out once it has been put in.

Perhaps the one most important step in the autopsy from the embalmer's viewpoint is the cutting of the carotid arteries. It is through these vessels that he wishes to inject his hardening fluid into the face. And one must remember that his prime function is not to have the face look unpleasant at the hour of the funeral. The carotid arteries must always be left as long as possible, so that injection cannulae may be easily inserted into them. Even when the autopsy includes removal of the organs in the neck and mouth, the carotids must be protected if the hospital seeks the friendship of the embalmer. To further help the embalmer, strings may be tied to the carotids and brought outside the body at the time of sewing up. Following the strings to their source, like a child on a treasure hunt, brings pleasure to the seeker of cut carotid arteries.

An even more helpful procedure in connection with the cut arterial system is the use of the glass injection cannulae (5 cm. long) shown in the accompanying photograph. One set is tied into the great vessels of the heart—into the innominate artery, the left common carotid artery, and the left subclavian artery. These three cannulae lead through rubber tubing and two U tubes (3 mm. internal bore) to a rubber tube which is left protruding from the upper part of the midline incision when the body is closed. Two more cannulae are tied into the right and left common iliac arteries and are connected through one U tube with a second rubber tube which projects from the lower part of the midline incision. The embalmer can therefore attach



Glass Injection Cannulae Used at Peter Bent Brigham Hospital

his injection apparatus to these two rubber tubes and pump his fluid directly into the head and arms and into the legs. The sawdust in the body will take up any excess of embalming fluid so that the undertaker, if he wishes, need not open the body at all. The tubes are buried with the body.

When these systems of cannulae are put in, tap water under rather gentle even pressure should be run into them as a test for leaks. Such leaks should then be caught with hemostats and tied. This testing is particularly valuable as a means of finding nicks in the carotid arteries, tiny holes which in the past have so harassed embalmers as to make them oppose all autopsies—and not without cause. Also, this testing with water run in through a rubber hose and glass tube from the faucet brings out the integrity of the ties on the arteries at the base of the brain. For this reason, the skull should not be closed until this testing is complete. A needless excess of tap water should not be introduced into the circulatory system although the writer has yet to hear of any swelling of the tissues due to osmosis. The use of normal saline solution is far less convenient than tap water and does not seem necessary.

The use of cannulae in autopsied bodies in order to help the embalmers has been described in the literature by H. W. Williams, M.D., and D. G. Henderson, M.D., in the New England Journal of Medicine, Vol. 211, No. 8, P. 371, August 23, 1934, under the title "Restoration of Autopsied Bodies—a Better Method." The idea came to the Peter Bent Brigham Hospital from the Truesdale Hospital in Fall River, Massachusetts. The tubes as now used at the Peter Bent Brigham Hospital represent a cost for U tubes and rubber connections of about thirty cents per case ($200 per year). The cannulae that are inserted into the arteries are made in the pathological laboratory from ordinary scrap glass tubing (3 mm. bore), the insertion end being drawn out slightly to give a narrower neck for secure tying.

In closing the head, the cut temporal muscle on each side should be securely sewed together. This, together with the posterior V-shaped bone cut described above prevents slipping of the calvarium. Moreover, if necessary because of a rough saw cut, a piece of adhesive tape may be put across the cut in the temporal and frontal bones to prevent marking of the overlying skin.

If any long bones or their joints have been removed, reconstruction may be accomplished by the "broomstick" technique. A piece of wood such as a piece of a broomstick, cut to the proper length, is sharpened at each end and driven into the cut ends of the bone. This makes the limb rigid and aids the undertaker in laying out the body in the casket. Of course, care must be taken during the removal of the bone or joint not to destroy the main arterial circulation of the limb.

After the torso and head are properly closed, the body should be washed, reshrouded, and tagged with the patient's name. A mimeographed letter directed to the embalmer and reading somewhat as follows may be pinned conspicuously to the shroud:

"IMPORTANT NOTICE TO THE EMBALMER

as to the purpose of the two rubber tubes projecting from the skin incision.

"The head and both arms can be injected through the upper tube which leads through U tubes to glass cannulae securely tied into the innominate, left common carotid, and left subclavian arteries. If the skull has been opened, the arteries at the base of the brain have been tied, but plaster of Paris has *not* been applied.

"Both legs can be injected through the lower tube which leads through a U tube to glass cannulae securely tied into the right and left common iliac arteries."

Out of fairness to the funeral director, the body with the clothes bundle should be ready for him promptly when promised. If some unavoidable delay occurs, word should be telephoned to him at once, lest he make a needless trip with his hearse to the hospital.

DEATHS AND AUTOPSIES PETER BENT BRIGHAM HOSPITAL, 1913 THROUGH 1934

Year	Total Deaths	Medico-Legal Deaths	Deaths Not Medico-Legal (2)—(3)=(4)	Autopsies on Deaths Not Medico-Legal Number	Autopsies on Deaths Not Medico-Legal Per Cent
(1)	(2)	(3)	(4)	(5)	(6)
1913.....	80	3	77	45	58.5
1914.....	172	5	167	96	57.5
1915.....	210	18	192	100	52.1
1916.....	218	10	208	108	52.0
1917.....	225	20	205	114	55.7
1918.....	372	10	362	151	41.8
1919.....	253	17	236	102	43.3
1920.....	263	15	248	149	60.1
1921.....	251	9	242	153	63.3
1922.....	262	21	241	164	68.0
1923.....	274	24	250	145	58.1
1924.....	269	16	253	163	64.5
1925.....	313	24	289	191	66.2
1926.....	305	18	287	169	58.9
1927.....	309	18	291	178	61.3
1928.....	332	11	321	198	61.7
1929.....	329	13	316	219	69.3
1930.....	282	15	267	174	65.2
1931.....	296	18	278	207	74.5
1932.....	253	13	240	165	68.7
1933.....	276	13	263	170	64.7
1934.....	294	13	281	208	74.0
1913–1934....	5,838	324	5,514	3,369	61.2

The death certificate should also be ready for delivery with the body—and "being ready" includes being complete to the last detail. This point of being ready on time and to the last detail is important. The hospital that fails the undertaker in this last point—in any point, for that matter—is forgetting the influence of the rider on the balance beam.

III. *Past Weighings*

The accompanying table and the graph based on it show by years the percentage of autopsies obtained at the Peter Bent Brigham Hospital since its founding. In studying the graph, note should be taken of the trough of 1918-1919. These were the influenza years in Boston when deaths were many and autopsy-conscious house officers relatively few and busy. The hospital did not start placing the injection tubes in autopsied bodies until June 26, 1935. The possible value of this procedure in terms of a higher percentage of autopsies cannot be expected to show statistically for several years. Even then it will not be easy to measure this factor alone. Yet this simple bit of apparatus seems well worth while. It is certainly fairer to the rider on the balance beam.

Personals

Ethel A. Jones has succeeded Jennie Utne as superintendent of St. Luke's Hospital, Fergus Falls, Minn.

Dorothy Rines succeeded Mrs. Maud Burkhart as superintendent of the American Legion Hospital for Crippled Children, St. Petersburg, Fla.

Alice B. Coe, formerly executive assistant at the Massachusetts Eye and Ear Infirmary, Boston, is now superintendent of the Milford Hospital, Milford, Mass.

Marion Zilley, formerly director of nursing at the Wisconsin General Hospital, Madison, is now superintendent of nurses at the Touro Infirmary, New Orleans, La.

Dr. Charles E. Martin succeeds Dr. John G. Copeland as medical director of the Albany Hospital, Albany, N. Y., of which Everett W. Jones is superintendent.

J. Lou Brandel, president of the Board of Trustees of the Memorial Hospital, Owosso, Mich., was named superintendent following the resignation of Dr. G. T. Soule.

Dr. Roy L. Leak has resigned as superintendent of the Connecticut State Hospital, Middletown, Conn., and Dr. Clifford D. Moore has been appointed as his successor.

M. Haskins Coleman, Jr., has resigned as superintendent of the Johnston-Willis Hospital, Richmond, Va., to become director of the Richmond Hospital Service Association.

Ella Moffatt has assumed the superintendency of the Galt General Hospital, Galt, Ont., Canada. Miss Moffatt was formerly assistant superintendent of the General Hospital, Chatham, Ont.

Dr. William H. Walsh has been appointed by the United States Government as a special consultant to study the hospital needs in connection with the Institute of Tropical Medicine in San Juan, Puerto Rico.

It is proposed to make a study of the situation there, after which plans for a new hospital will be formulated in association with the officials of the Institute.

The task of coordinating the work of government and mission hospitals in China has been given to Dr. Edward H. Hume, former director of the New York Post-Graduate School and Hospital, New York City.

Sister Courville, formerly superior of St. Vincent's Hospital, Toledo, Ohio, has been appointed mother provincial of the Sisters of Charity with headquarters at the Holy Ghost Hospital, Cambridge, Mass.

Dr. Milburn W. Kemp has been appointed superintendent of the Anoka State Asylum, Anoka, Minn., succeeding the late Dr. A. T. Caine. Dr. Kemp was formerly assistant superintendent of the Fergus Falls State Hospital, Fergus Falls, Minn.

Ralph M. Hueston, who for several years past has been the superintendent of the Silver Cross Hospital at Joliet, Ill., has resigned effective January 1, to accept the superintendency of the Hurley Hospital, Flint, Mich.

The Silver Cross Hospital is a 133-bed general hospital and one of the finest in the State. Mr. Hueston leaves the Silver Cross Hospital to accept the superintendency of a larger hospital in one of the prosperous Michigan manufacturing centers.

The Dietitian as a Part of Hospital Administration

KATHERINE MITCHELL

President of the American Dietetic Association
Dietitian, Michael Reese Hospital, Chicago, Ill.

THE DIETITIAN came into the hospital world through the front door. She was invited in as rather a luxurious gadget. Her work was first the teaching of student nurses "Diet in Disease," and a little later the supervision of the preparation of special diets. It was thought at first that her services could be rather easily eliminated if times got hard. So it was in the beginning; but that is not the universal situation today, and will be true less and less in the future.

The dietitian has worked her way from the front door to the back door; she has made herself through the feeding of all patients and personnel an integral part of the whole hospital machinery. With the backing of the superintendent she will in the future take her place in the administrative cabinet of department heads governing the hospital.

The expression "dietary department" is still a most variable term. It varies from a situation in which the department is in charge of special diets for patients and the instruction of nurses, to one in which the department is in complete charge of the food problem in all its phases. The dietary department of the first instance is not, in my opinion, in reality a dietary department.

Direction of the Department

It is obvious that a hospital, or any other organization, feeding large or small groups must place some one person in charge of this work. There are, in the main, two types of persons who are equipped for the job: (1) Persons with hotel experience; (2) Dietitians. In analyzing the qualifications of the two types for work in the hospital, one is brought face to face with the fact that although hotel persons can handle the preparation and distribution of food for well people, they have had no experience in the feeding of sick people. Assuming that the hotel-trained person can become familiar with the general diet for hospital patients, he has had no training for special diets. Reasoning in this manner, a hospital needs a dietitian even if a hotel person is employed for part of the food work.

Some places employ both a hotel person and a dietitian for what should be one person's job. In most cases a dietitian, if she has had proper training and is given sufficient responsibility, can handle the job much better than a hotel-trained person. In addition to her special education she has had the experience of contacts in working with medical, nursing and other professional groups in the hospital. In any organization, the employment of two persons for practically the same job brings about divided responsibilities with twilight zones of responsibility and sets up a rather weakened organization fabric. Hospitals are no exception to this general rule. It has been the experience of many hospitals that a competent dietitian in charge of food will be more pliable and adaptable in meeting changing situations than the hotel person who is accustomed to much more rigid regimes and who has dealt almost entirely with male personnel in hotel kitchens and dining rooms.

The dietitian to be in charge of food should and must be given actual responsibility sufficient to discharge the job. Partial responsibility usually results in disorder.

The introduction of dietitians into many hospitals was an innovation. Some administrators, not willing to face a changed situation squarely, did not give the dietitian enough responsibility to do the job properly. It is probably true that in most of these organizations the food job was quite unsatisfactory. It is likewise true that these administrators blamed the condition, which was really their own making, on the dietitian. It is obviously evident that every dietitian, even if given proper authority, cannot deliver a satisfactory food job. Dietitians vary in their capacities like all other humans. But with proper authority, competent dietitians will deliver better food jobs more economically than persons with any other type of training.

The dietitian in the administration of food service is closely tied up with the three major phases of hospital work. Through the feeding of all patients, she is allied with the interests of the medical and nursing staff. Whether the patient is on a special diet or not, his nutrition is an important factor in his convalescence. Through her contribution to the teaching of student nurses, of patients and, in some

cases, of student dietitians and medical interns, she takes part in the educational program of the hospital.

But it is what she can mean to hospital administrators that I wish to emphasize. The dietitian responsible for the feeding of all patients is an important factor in community satisfaction. Few patients ever criticize operating room technique or methods used in the X-ray department. These phases of hospital care are to the average patients shrouded in the glamour and mystery of science. But every man is an authority on food. Much of the patient's reaction to the hospital depends upon his satisfaction or dissatisfaction with the food. Since the patient's opinion will be generally broadcast over the bridge table, this is an important administrative problem, particularly to the private hospital.

The dietitian must be able through her own department to contact patients, to learn their food preferences and, in so far as is compatible to medical orders and the food budget supply, each patient's desires. The returned tray is one of the best barometers of the success or failure of the food service. How much food is returned and why? A member of the dietary department should see not only the tray going into the patient but the tray returned to the kitchen. The dietitian must be in close touch with the patient so that she can by minor adjustments make the food meet his individual tastes. An organization which makes such contacts possible will eliminate food waste and increase food satisfaction. Patients' satisfaction with the food service is one of the dietitian's administrative responsibilities.

The Dietitian's Part in the Program of Economy

Of equal, or perhaps even more, significance to the hospital administration is the dietitian's part in the general program of economy. Certainly no hospital administrator can overlook his obligation to his community of reducing to a minimum the financial burden of hospitalization. It is in this program of economy that the dietitian must play an important role.

It is not new to any of you to have me state that food is one of the largest items of the hospital budget. By food I mean, of course, raw food, its preparation, distribution and service. The management or mismanagement of this item can heavily influence the total expenditure of the institution.

A dietitian is the logical person to place in charge of food. She knows its nutritive value and can intelligently make substitutions which result in economy. Her first professional responsibility is that the menus are made up of foods which will supply adequate amounts of all the essential nutrients; and secondly, that the food is well prepared and served. How much variety is introduced into the menus, the degree of simplicity or elaboration of service depends upon what the hospital administration wishes to offer the community. An adequate single diet for groups of well persons can even today be supplied at a raw food cost of something like $0.14 per day; perhaps in some communities for less. From this basic cost, hospital diets with their varying requirements may be increased to 25 to 30 cents or a dollar or more a day. It just depends upon whether the clientele is to be given their amino acids as beef stew or French lamb chops. Are the vitamins and minerals going to be furnished by cabbage and carrots, or brussels sprouts and avocado pears? The dietitian's responsibility is to be sure all the nutrients are provided; and second, to make certain that the beef stew, if it is beef stew, is well prepared. As much thought and care must be given to the standardization of recipes for beef stew or baked beans, as for the hollandaise sauce for broccoli. How much is to be spent, how elaborate the food service, are questions for the hospital administrator and the governing boards. The administrator cannot do the impossible. The responsibility for food policy rests finally with the governing boards who in the last analysis must arrange for the payment of the bills. The administrator must outline this policy to the dietitian. She must give the type of food service desired at the lowest possible cost for that type of food service. Having determined what the hospital's food policy is to be, the hospital administrator must be prepared to stand back of it. This is particularly true in regard to food for personnel. The hospital superintendent often presents an institution version of the old man, the boy and donkey story.

You remember the fable how first the boy rode the donkey and the man walked beside. Passers-by criticized saying, "Look at that wicked little boy. Has he no respect for his father's gray hairs? Why doesn't the little boy walk and let his good old father ride?" So the man jerked the boy off and rode the donkey himself.

The next group of passers-by cried out at him: "What a mean old man, riding at his ease while his little son stumbles on the rough road." The man was bewildered but finally decided to please everyone; they would both ride. So the little boy climbed on behind him.

More passers-by; louder complaints. "What a cruel thing to do. Poor little four-legged beast. Why don't they carry him and see how it feels." The man thought this must be the solution. So he and the boy dismounted and tried by various means to tie up the donkey's legs so that he could be carried on a pole. But the donkey was not pleased

and in his protest kicked himself loose and ran away, and the man and the boy went home, sadder by the loss of their donkey and wiser with the knowledge that it is very difficult to please everyone.

This fable is, I think, applicable to many hospital superintendents' inconsistencies. Unfortunately, we meet too many administrators with just such vacillating minds. There is a board meeting and some member says: "You are spending too much for food."

The next day the superintendent sends for the dietitian. "You must cut down on the food cost." A few days later an intern says that the food isn't fit for a dog to eat, and the superintendent sends for the dietitian. "You must serve better food," and so it goes. Nor is the dietitian's record blameless. Too often she has contributed to the superintendent's confusion by inaccurate statements in regard to food costs. I sometimes think the most intelligent answer any worker can make is, "I don't know. I will try to find out." At least it does not delay progress by sending one down the wrong track as a quick glib answer does. The dietitian must be a seeker after real fundamental information regarding food costs and food resources.

If the hospital governing board were presented with the definite facts that such and such a menu can be served at one figure and how much more it will cost to provide a different type of food service, they can decide what food policy they wish followed. The dietitian with the help of the superintendent must be prepared to furnish such facts to the governing board. The superintendent with his wider knowledge of the business world can guide the dietitian in her food purchases. The dietitian with her appreciation of food values can suggest suitable economic substitutions.

Self-Complacency the Dietitian's Danger

The greatest danger for dietitians (perhaps it is equally true in all lines of work), is self-complacency. She must not relax comfortably and say, "I am doing a swell job." However good her organization is, it probably could be better. Certainly this is true from the standpoint of food costs. I believe we are only beginning to scratch the surface of food cost economies.

We have grown up in a land of plenty and we do not know the resources we have available. We have not practiced the short cuts of real economy. No general rules can be laid down. There are variations in different localities; the size of the institution, the number of people to be fed; all points must be considered.

The important thing is to make a thorough study of the facts. Be sure of the answer. Do not accept the glib superficial answer until you know the facts. Is it economical to make your own ice cream? Your own bread? Are canned vegetables cheaper than fresh vegetables? What is the relative cost of a fish meal compared to the cost of a meat meal? Is it to your advantage to put your own fruit, meat, butter, eggs, cheese in storage? These questions cannot be answered generally. They are just the beginning of a long string of possibilities that must be carefully studied if true food economy is to be accomplished.

Young dietitians, the dietitians of the future, come to their jobs with much better preparation than dietitians of my generation. I believe some of us should have paid the hospitals tuition rather than accepting a salary, many of us learned more or less at the expense of the hospital. To some extent that will always be true. We are always gaining new knowledge through our work; but the young dietitian is coming to her job with better equipment in education, training, and experience.

Colleges and universities have improved the value of the courses offered to students planning to enter institutional work. Purchasing of food and equipment, large quantity cooking, personnel management, cost accounting, are among the courses now offered to students. These courses are not given as theoretical lectures alone but are accompanied by laboratory demonstration and practical experience. This work in institutional management is in addition to the thorough studies of nutrition and allied sciences which comprised most of the preparation given to prospective dietitians ten years ago.

Having completed this well-rounded college course, the student enters a hospital as student dietitian. The past ten years have seen many developments and improvements in the caliber of work offered.

Not so many years ago many hospitals were exploiting dietitians, taking young home economics graduates, using them in any capacity for which they might be useful, and feeling no obligation or responsibility to give them a variety of study and experience which would fit them for their future work. This situation has been very generally improved.

A committee of the American Dietetic Association has worked out the minimum requirements that must be included in hospital training of a student dietitian. This committee was made up of experienced dietitians familiar with the problems of hospital food administration. Helpful suggestions and valuable advice were given by deans of home economic colleges, leaders in nursing education, by officers of the American Hospital Association, the American Medical Association, and last but cer-

tainly not least, by our good friend and counselor, Dr. MacEachern.

The course for student dietitians now includes a variety of actual experience in therapeutic diets, contact with patients, teaching of student nurses, work in food clinics, supervision of employees, standardization of recipes, food cost studies, and food purchasing. In general, the student dietitian actually participates in all of the variety of problems of hospital food service. In order to cover this variety of experience, the courses were lengthened from four months to eight months to a year.

Hospital administrators have been most cooperative in offering the facilities of their institutions to make this training possible. Members of the medical and nursing staff have given most generously of their time to aid in the work of preparing the dietitian of the future for you.

Graduates of such hospital dietetic courses are not "inexperienced" in the old sense of the word. They have had opportunity for study, observation and experience to equip them for the many responsibilities of the job as dietitian. They are prepared to meet the administrative as well as the therapeutic and educational problems. These dietitians of the present and the future will, with the backing and help of the superintendent, play a more significant part in hospital administration. Through their work better food satisfaction and greater food economy will be accomplished.

Hospital Hazards

By LEWIS A. SEXTON, M.D.
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THIS EPIGRAMMATIC COMMENTARY is offered for what it is worth. The hospital that stops to count the cost of maintaining safe equipment, as compared in dollars and cents to the value of human lives, may never expect the whole-hearted support of any community.

Human life safeguarded at its best is a hazard. There come to our doors each day the pitiful remains of what an hour before had been the embodiment of a human soul. As the years go by, less and less importance attaches itself to the value of human life. The toll that is taken daily in the ranks of normal individuals by accident makes all the slaughter of war look like child's play, yet we accept it with little protest. It is because automobile accidents have become so common that they cease to be news and have been dropped from the front pages of our morning papers to give place to the things that claim the attention of a populace that is more sophisticated. The most that can be said of such holocausts and catastrophes is that it is "Just too bad," and unless they occur in our own home town and are brought to our immediate attention they are relegated to the smaller type and appear with the syndicated articles and the world thrilling events that emanate from Reno.

The main thought that attaches itself to hazards occurring in our own hospitals is to know whether we are insured against similar risks. No thought has been given in these rambling remarks to the innumerable hazards that attach themselves to the mentally ill, or to institutions caring for this type of case. It has always seemed to us best to keep any type of disturbed patient on the ground floor. The most they can do then is to crawl out the window and run up the street in a night shirt, and so far this has not proved fatal. There can be no doubt, however, that the care of the mentally ill and the creation of every device to safeguard that type of patient will, in the future, claim more consideration by the general hospital than it has in the past, and provision must be made for these cases. That, however, is a subject for the committee on construction to consider. We will enumerate but few of the hazards that may occur in our general institutions, when taking them in the order of their importance. We will mention a few that have come under our personal observation during our thirty years of administration.

Hazards from Anesthetic Gases

The hazard incurred in the use of anesthetic gases (ethylene, propane, and ether) has been described too frequently to justify detailed consideration at this time. However, they do deserve having attention called to them in passing. All anesthetic apparatus and operating tables should be grounded, either in the original construction of the operating rooms, or later. This should prevent explosions which almost invariably occur from static electricity that is always present except in air conditioned operating rooms. No gas that is used for anesthetic

purposes is, in our opinion, any more than ether, safe when the fumes are permitted to accumulate during long operations or from one operation to the next. All operating rooms should be air conditioned and a complete change of air should be effected between operations. The time required for this is merely a matter of seconds. Operating rooms should be air conditioned also to prevent unduly low temperatures in the winter during operations, when the complete relaxation of the patient may subject him to unnecessary risks, and in the summer to prevent extreme prostration because of excessive temperature—not to speak of the comfort of the surgeons and nurses.

Many things may occur with apparatus handling mixed anesthetic gases that are not yet clear to us.

We had a small explosion in one of our operating rooms which, fortunately, did no damage, but was of enough concern for us to look into the probable cause. We asked the assistance of the department of chemistry of Trinity College, and after a very thorough examination it was decided that the metal coil which maintains the lumen of the large tube which extends from the gas oxygen apparatus to the patient's face had become oxidized and that the contact of this oxidation with the mixed gases flowing through the tube caused the ignition of the gas, which, perhaps, was mostly ether in this particular case. We immediately replaced all of the tubes with the type which has no metal support to maintain the lumen. We merely bring attention to this single occurrence because of the ease with which many of these explosions may occur. Of course, the storage of medicinal gases in a cool place is essential at all times, and the absence of greases and oils at the point of connection with the yoke of the apparatus.

In one of our very good hospitals about two years ago a little boy had pneumonia and was in an oxygen tent. It so happened that he had a birthday during the time, and they brought him in a cake with the proverbial candles all lighted for his pleasure and delight and got them too close to the tent. The whole thing exploded and the patient was killed. Moral. ✓

Electric Heating Pads and Hot Water Bottles

The hazards that exist in our institutions in connection with electric heating pads and hot water bottles, fires that occur by not allowing the patients to smoke in bed, are subjects that must be handled individually. Just a word at this time in connection with allowing patients to smoke in bed. Of all habits acquired by the people of the world, perhaps smoking is the most prevalent. The amount of comfort and pleasure to be derived by the smoker can only be described by himself. Take the patient who must lie in bed with nothing to occupy his mind except his own troubles, and if he is an habitual smoker we can conceive of no greater hardship than denying this man this privilege. Years ago the thought of permitting a patient to smoke in bed was just not thought of, but experience is a good teacher and we have found that the patients' friends and relatives would smuggle cigarettes in to them and that times when the supervision of the wards was not as exacting as at others, late at night or when the nurse was occupied elsewhere, these patients would light cigarettes and smoke them under their sheets, with the result that bed fires occurred too frequently. How much better to allow this privilege to every patient in the hospital when he may have his choice brand and his ash tray and matches open and above board where he may smoke to his heart's content, feeling free and easy about it —not to speak of the humane privilege this permits the patient.

Your committee on fire insurance rates rendered a signal service to the country a few years ago, and we hope that the inspections made at that time did much to eliminate hazards, both to patients and to property. The great disaster growing out of the Cleveland fire was enough in itself to make necessary a complete change in the type of X-ray film used, and the additional cost of insurance which our committee imposed upon institutions insisting on the use of nitrite films we hope has finally eliminated this hazard.

Fire Hazards

The greatest hazard that is ever present in our institutions is fire, and the great inclination of the majority of superintendents who read these articles which deal with these necessary precautions is their determination to put them into effect in their respective institutions, and when they are brought to the attention of the board and the cost is counted and the fact emphasized that they have never had a fire, to forget the things that have been so frequently brought to their attention. The construction of anything except fireproof buildings for the care of the sick should never be considered at any time. The safeguarding of the patient, the reductions in the cost of insurance, the peace of mind to those responsible that comes with this type of construction compensate adequately for the additional cost. The safeguarding of existing buildings is one that cannot be too seriously considered—no matter what the cost may be. The public from whom our patients come is entitled to know what the conditions are, where they are to be placed when they are unable to take care of themselves. It is the duty of every administrator and every hospital board to acquaint the public with these condi-

tions and it is safe to predict that, knowing all the facts to effect them, the public will assume the responsibility for the cost and construction of a safe place for those that are ill. Proper exits, fire escapes and sprinkler systems are the chief methods of protection in the now existing large number of non-fireproof hospitals throughout the country. The reduction in fire insurance rates effected by the installation of sprinkler systems will, in the average type of construction, pay the cost of the installation in about twelve years; but again, the question of cost should never be pitted against the value of human life, since it is the life and comfort of the patient that creates the whole problem of hospitals and all that go with them. One of the frequent and little understood causes of fires in our laundries comes from the incomplete saponification of the oils and greases which have been taken up from ointments and oily dressings. If those are washed incompletely, tumbled and left in a box, spontaneous combustion will almost invariably occur in a few hours. All laundry having any oils or greases in it whatever should be separated from the other laundry and given a special washing with a sufficiently strong solution of soda to insure the complete saponification of all the oils and greases which they may contain. This once accomplished, they can be treated the same as any other laundry. More than one fire has occurred in our laundry from this cause before we became familiar with the chemistry of oils.

Weekly inspection of every hospital from attic to basement should be made by someone in authority to check the accumulation of inflammable material. This occurs in our hospital every Thursday and there are very few inspections made that do not justify the cost of time and trouble.

The American District Telegraph Company, out of their desire to serve, also to create a large volume of business, have gone very largely into the matter of safeguarding the lives of sick people. Again, the cost is rather considerable, but again, that cost must be measured by the value to human life, and that value depends in a large measure upon how close to you that human may be. They have evolved a signal system whereby every sprinkler head in the hospitals which they equip is connected with an indicator in their main office, and the moment any sprinkler head goes off, from whatever cause, it is registered in their main office. Their charts and diagrams show immediately where in your hospital this particular sprinkler head may be. They communicate within the minute with the fire department and long, perhaps, before you are aware that anything has gone wrong in your hospital the fire apparatus arrives and knows exactly where to go. This, to our way of thinking, is our greatest safeguard—first, an approved sprinkler system, and second the connection with the A. D. T., who is your perpetual watchdog. We installed this system in the Hartford Hospital several years ago and have had a great many occasions to congratulate ourselves upon the farsightedness of the board in taking this precaution. True, many times the fire department has to show up at the hospital when there is no fire, as there is no way of knowing what causes a particular sprinkler head to go off, but the assumption is that it always means a fire.

One might go on almost ad infinitum on the hazards that occur in hospitals, but we hope that the foregoing remarks may come to the attention of some one of the thousands of hospitals, which will justify the effort of this attempt. Space is not permitted us to go into the consideration of the hazards that may occur in the professional care of patients and our hope to avoid surgical hazard to our patients is to staff our hospitals with men who have more ability than courage.

The Insignia of The American Hospital Association

The insignia of The American Hospital Association, as it appears on the front cover, is of unusual interest. It embraces and combines many things. In three colors, maroon, blue, and gold, it is artistic as well as emblematic. Quartering, we have the *Lorraine Cross* in blue. This Cross has been the emblem of relief to the unfortunate since medieval times. In red, it is the official sign of the American Tuberculosis Association. The *Caduceus,* or the *Wand of Mercury* and *Serpent of Æsculapius,* has symbolized the healing art for many thousands of years. The *Maltese Cross* has been the emblem of the Knights of Saint John of Jerusalem since 1092 A.D., and for several hundred years has also been used by the St. John Ambulance service. The international emblem for the relief of sick and wounded is the *Geneva,* or *Greek Cross.* The *Urn Lamp* is universally accepted as symbolic of knowledge. It is the official emblem of the Florence Nightingale Nurses. The *American Eagle* symbolizes the United States of America; the *Maple Leaves,* the Dominion of Canada, and the whole is supported by the classic Latin motto *Nisi Dominus Frustra*—"Without God we can do nothing." All of these symbols are integral parts of the sign-manual of The American Hospital Association.

Organization of Hospitals

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Types

Classification.

Ownership

I *Governmental.*
1. Cities.
2. Counties—Cities and Counties.
3. State—usually mental and tuberculosis.
4. Federal—Army, Navy, Dept. of Interior, Veterans.

II *Voluntary*—Not organized for profit.
1. Church.
2. Fraternal.
3. Miscellaneous. Many other groups—community.

III *University Hospitals*—Serve as teaching hospitals for medical schools.

IV *Private—Proprietary.* May be unrestricted as to profit. May be endowments in any group except governmental, which ordinarily are never endowed.

Type of Service

1. General Hospitals—12 per cent have tuberculosis departments.
2. Special.
   1. Nervous and mental.
   2. Tuberculosis.
   3. Maternity.
   4. Industrial—operated in connection with industrial plants.
   5. Eye, Ear, Nose and Throat.
   6. Orthopedic.
   7. Isolation—contagious.
   8. Convalescence.
   9. Hospital department.
   10. Children.

Management—Classified

1. Federal—operated under existing departments of government.
2. State—operated by special department, or through the extension of executive powers.
3. University—by trustees of medical schools or regents of universities.
4. City, and city and county combined, or single operated by departments of local governments.
5. Private — voluntary — proprietary. By owners through private central control; through the election of the boards of directors by stockholders.

Size of boards of control.

Experience generally favors a small board not to exceed nine members, preferably less. Large boards sometimes desirable to cover the representation of various community interests, but do not function as well as smaller bodies.

Administration

Generally hospitals have a three-fold function:
1. Healing of the sick (medical function).
2. The training of those who care for the sick (teaching function).
3. Prevention of disease—(building of health).
4. Studies of new methods relative to promotion of the general health program (research).

Board of Trustees—Board of Directors, Board of Governors.

Duties defined and outline of responsibilities found in adopted constitution and by-laws. If the hospital is a corporation, it is a distinct legal entity created by law. Methods of election and membership defined.

Responsibility.

"Cannot be delegated" ruled by Supreme Court.

Must accept full responsibility for action taken in all matters including the care of patients and all financial concern involving management of the institution.

To discharge this responsibility court ruling has decided that it is the unquestioned right of the board to say who shall and who shall not treat patients in the hospital, whether they be charity or private.

Ultimate good of patient.

Function often by means of committees.

Regular board meetings necessary.

Selection of Superintendent (executive) most important single function.

Application of common sense and business principles often entirely disregarded.

When the Superintendent is appointed, it is the responsibility of the board to allow him to function as the executive, while their own activities are confined to legislative functions.

The Superintendent—the Director, Manager. Responsible to the board of trustees.

Serves as:

a. Executive agent of the board.
   Translates its policies into action.
   Acts as expert advisor on technical matters concerning hospital matters.

b. Must have a background of education.
   Experienced.
   Informed relative to accepted methods in other hospitals.
   Personality required of a leader.
   Must expect and receive a reasonable salary.
   Integrity of character.
   Capable of organizing and operating a hospital.
   Must attend meeting of board of trustees.
   Fully assume the responsibility for every administrative activity in the institution.
   Be able to delegate responsibility.

Basic Principles of Organization

1. Planned course of procedure. Each department operates as a unit, but well coordinated through the executive.
2. Careful development of technical procedure.
3. Outline purposes of institution; its desire of accomplishment.
4. Plan of organization to accomplish these purposes.
5. Selection of personnel to provide man-power to complete the plan of organization.
6. Careful definition of duties of personnel, together with outline of relative function and lines of responsibility.

There are five constant and important factors which characterize efficient hospital management:

1. Organization.
   a. Duties.
   b. Responsibilities.
   c. Relations.
2. Coordination.
   Many units, each performs a particular function as a part of the whole.
   Marked inter-dependence between them.
   No duplication with corresponding wastage of time, energy and money, and elimination or omission of services necessary.
3. Cooperation.
   Provides a smoothly functioning organization and results in the best care of the patient and the fulfillment of the functions previously mentioned.
4. Service.
   All efforts focused on the patient.
5. Economy.
   Systematic planning of work.
   Regular and competent inspection of all departments to recognize wastage and eliminate it; plan continual maintenance.
   Accounting of all material and purchases.
   Budgeting for all departments, worked out on a definite basis of services to be rendered.
   Maintenance of a constant campaign of education in economy for all hospital personnel.

For purposes of administration a hospital is organized into departments in order that the function of the institution may be properly carried on. For purposes of this discussion the following departments will be discussed:

Administration

In charge of a qualified accountant or chief clerk.

Responsible to the executive of the hospital for the business administration of the institution.

1. Expenditures within the budget.
2. Handling of office and clerical personnel.
3. Collection of income. Disbursement covering payment of bills.

Nursing

In charge of a qualified executive—graduate, registered nurse trained in modern nursing technic and qualified in nursing education. Responsible to the executive for the nursing care of patients in the institution and for the successful operation of the nurses' training school including teaching, when a training school is operated.

Responsible for the personnel assigned to her department and for effective assignment to duty.

Culinary and Dietary

In charge of a qualified trained dietitian. Responsible to the executive. Chief duty is the appropriate feeding of patients and personnel in the institution. Requires the preparation of diets both as a part of medical treatment and general diets for patients and the planning of meals for personnel.

Often duties include purchasing of food, inspection of food on arrival, storage and issuance of all food.

Responsible for personnel assigned to the department and for their effective assignment in the department.

Medical—Professional Service

In charge of a physician; sometimes spoken of as chief resident, assistant superintendent, or medical director.

Responsible to the superintendent for the professional care of patients. Particularly responsible for the training of interns and resident staff and for the excellence of their service.

Members of the visiting staff, voluntary or other-

wise, must be coordinated through this department, even though such staff members ordinarily assume direct responsibility to the executive.

Through his organization interprets the medical work in the institution to patients and their relatives and interested persons.

Must coordinate all professional services in the hospital including the nursing service, dietary, X-ray, laboratory, pharmacy, physiotherapy, and any other specialized professional department.

Housekeeping

In charge of a trained person who serves as director of the department.

Is responsible to the executive for cleaning of hospital. She is responsible for the furnishings of the hospital including hospital furniture, drapes, carpets, etc. Directs personnel assigned to her department and assigns them to duty.

Engineering—Maintenance

Ordinarily this department is in charge of a trained engineer who is responsible to the superintendent for the conduct of the mechanical department of the hospital and maintenance of buildings and grounds.

His duties include operation of power plant, supervision of all skilled mechanical trades including carpentry, machine shop, plumbing, painting and electrical.

Maintenance and operation of power plant through the business office; secures the necessary material for purpose of maintenance; is also responsible for the grounds and mechanical equipment including motor vehicles, etc.

The Hospital Housekeeping Department

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THE housekeeping department of the average hospital is charged with the important duty of keeping the institution clean and orderly. The head of this important department should be given full authority in carrying out her various duties, and should be responsible only to the administrative officer. Besides being responsible for the general household cleaning, the housekeeper has general supervision of the laundry and linen room, as well as the transportation of soiled and clean linen for all departments. In large hospitals, the laundry and linen problems may be separate departments, but they must function in harmony with the housekeeping department. In this instance, the heads of the three departments are usually responsible to the assistant administrator of the hospital.

Taking the housekeeping problem as a whole, it has direct contacts with most of the other major hospital departments, viz.: the nursing department, the dietary department, the X-ray department, the engineering department, and the laboratory. The duties of the housekeeping department must routinely go on, and be harmoniously carried out so that the efficiency of these departments is maintained. The housekeeper should not take orders from these departmental heads, but the work should be detailed, and orders issued from the office of the administrator, as occasion arises. Each of the participating departmental heads should realize that cooperation is the keynote of efficiency.

If the laundry and linen rooms function separately, the same cooperative relationship must exist.

A good housekeeper, with vision, a keen sense of duty, and an elastic willingness to understand each of the dependent departmental needs, is a valuable and indispensable asset to any institution, large or small. She must be well-trained in the handling and training of personnel, and have a knowledge of cleaning materials, and their economic and proper use.

Her duties have been described by some as being 10 per cent organization, 10 per cent training personnel, and 80 per cent supervision. The supervision is of a varied nature, and includes supervision of the general household cleanliness from cellar to garret, including corridors, offices, and windows. Also the cleaning of porches, screens, sidewalks and entrances; and, depending on the size of the hospital, the general supervision of the laundry and linen rooms, with the transportation of soiled and clean linen from all departments. She must prepare the linen requisitions, and those for supplies, and direct the sewing room. The care of wood and metal furniture and general household equipment require her supervision. The employment of personnel (if the institution does not have

a central personnel office), and the allocating of routine duties for all housekeeping employees, are part of her work. She is responsible for the removal of refuse, or the care of incinerators, where installed. She must maintain inventories, and prepare the routine performance reports of her department for the administrator.

Above all, the cleaning work must be done so as not to inconvenience departments or disturb patients. This requires careful planning and close cooperation with other departmental heads. The comfort of the patient has a direct bearing on housekeeping and cleanliness.

The varied activities of the hospital necessitate that housekeeping duties be subdepartmentalized and carried out on a prepared schedule. Some of the duties of personnel are daily, others are weekly and monthly cleaning propositions. The various jobs are scheduled on the housekeeper's individual experience.

The functions or duties of the housekeeping personnel are by nature very varied, although they are, in the main, cleaning problems. Maids are detailed to floors or wards to clean, sweep, and dust beds, floors, furniture, and equipment. Here there is a close contact with the nursing department. The head nurses must not interfere with the assigned duties of the maids, but may direct the work so that it does not interfere with the nurses' duties or patients' comfort. Complaints or criticism against housekeeping personnel should be made direct to the housekeeper. Employees should be instructed as to their conduct on the floors towards the patients and nurses. The operating room is allotted maids and orderlies, although many hospitals place these employees directly and permanently under the operating room supervisor. The same plan is applicable to the delivery rooms. The food service divisions, floor pantries or kitchens may be cleaned by the housekeeping department staff. These employees also do floor dishwashing, and assist in the service of meals to ward patients. Some hospitals have found it more satisfactory to place the floor kitchens and their upkeep directly under the dietary department; the steward or dietitian doing the supervising of these personnel.

In some smaller hospitals, the duties of housekeeper and dietitian are combined, and with the proper individual with adequate training as the departmental head, with assistants if and when necessary, the combination works out very well.

Special Housekeeping Problems

The selection of personnel is of great importance. Physical examinations before hiring wallwashers and porters is most desirable. Physical fitness for all housekeeping jobs should be a requisite. Before an employee is hired, he or she should be specifically informed what the duties are to be. Reference should be demanded and checked. People working in groups should be of the same type as far as possible, i.e., all colored, all white, etc.

After being employed, each one should be carefully instructed in his duties. Careful training by another trained employee plus the supervision of the housekeeper or foreman saves time and materials.

The organization of various housekeeping units differs. Some employees have individual jobs, others work together in pairs, and still others in groups, depending on the duties to be performed. The housekeeper should have certain key employees upon whom she can depend to act as deputy supervisors, with specific authority for certain jobs. These individuals might be called bosses, viz.: a boss windowwasher, wallwasher, cleaner, floor polisher, etc.—not in the sense of a foreman, but a worker. As a rule, housekeeping personnel requires constant supervision.

Cleaning Problems

Soap and soap products are ideal cleaners, but need correct application to get proper results. Good technic and proper equipment are necessary at all times to assure success.

Tile floors, baths, basins, urinals, etc., if they are clean to begin with, can easily be kept clean. If they are allowed to get dirty, the job is more difficult. Odors are the result of poor cleaning, and the application of so-called disinfectants will not clean them. They simply cover one odor with another. Proper application of soap and water with the addition of sodium carbonate is all that is needed. Cleaning problems are many, and require constant study and supervision by the housekeeper. They may be classified as outside and inside.

Outside

1. Outside walls and exterior building surfaces —stone, terra cotta, clay brick, sand brick, granite, limestone.
2. Iron work.
3. Brass, metal fittings, doors, name plates, etc.

Inside

1. Floors: *Cement*—painted, treated, untreated, terrazzo, tile.
   Wood—oiled, varnished, waxed, plain.
   Rubber
   Linoleum—print, inlaid, tile, battleship, cork, composition.
   Marble—(avoid strong alkali).
2. Tile—(Standing) ceramic, vitrified, semi-vitrified, flint.
3. Baths—vitreous enamel and tile fixtures.

4. Tubs, lavatories, fountains, sinks, pools, etc.
5. Walls (tile) in bathrooms, kitchens, halls, etc.
6. Walls (painted).
7. Marble statuary, railings, etc.
8. Metal and enamel equipment.
9. Wood furniture.
10. Woodwork.
11. Dishes.
12. Pots, pans, kettles of aluminum, iron, copper, enamel.
13. Monel metal—allegheny metal.
14. Food containers.
15. Garbage cans.
16. Sinks.
17. Greasy walls and ceilings.
18. Silver, nickel and chrome plated articles.
19. Windows—by personnel, by contract.
20. Painting—by brush, by spray.
21. Interior decorating.

Relationship to Engineering Department

Close cooperation is necessary and housekeeping personnel should promptly report leaky taps, loose fixtures, squeaky hinges, broken window panes, steam leaks, defective electrical equipment, etc.

Cleaning utensils should be selected for their durability. Good equipment is the cheapest in the end. Utensils such as pails, mops, sponges, and brooms, should be kept clean and never allowed to become dirty. Ladders, scaffolding, etc., should be kept in constant repair. Utensils and equipment should be selected with care and of style and type for the particular job. Equipment should be marked if used by washers, painters, etc. Floor cabinets should be clean, and contain nothing but cleaning materials and utensils. Trash and rubbish should never be allowed to accumulate in cleaners' cabinets. Personnel should not be permitted to hang their clothes in these places. Receptacles should be provided for waste and rags. Oily rags should never be left in cleaners' cabinets. Mops should be wrung out and be hung up. Enamel utensils are to be avoided due to chipping. Garbage and waste cans should be scalded daily.

Machines

There are several machines which can be used in all hospital housekeeping, irrespective of the size of the hospital, as follows:

Vacuum cleaners—The portable unit is indispensable. Central units are very desirable, particularly in large institutions.

Floor polishers—Where there is a large amount of linoleum, an electric floor polisher is an economy and does a much better job. Larger institutions have use for several of these.

Scrubbing machine—Where there are large areas to scrub, a scrubbing machine is also a labor-saving device. Not many of the smaller hospitals can afford these, however. There is on the market a polishing, waxing and scrubbing machine combined.

Paint sprayers—Several varieties, and they are useful for quick and economic painting of walls. Requires training in operation.

Vermin Control

Vermin is always a hospital housekeeping problem. Special knowledge, special materials, and oftimes skilled assistance are needed to control these pests.

The bedbug—Cleanliness is not a safeguard against bedbugs as they are brought in by visitors, patients, baggage, etc. Boiling water, steam, benzine, kerosene, fumigation with sulphur.

The cockroach—Dirty sinks, uncovered eatables, dampness and warmth attract roaches.

Borax, sodium fluoride, etc., will rid the places infested, together with improvement in sanitation.

Rats and mice—Can be trapped. Poison is unsatisfactory because animals crawl under floors to die.

Silver fish—Attack books, upholstery, and starched clothing. Keep rooms well-aired and dry. Spray with pyrethrum powder.

Ants—Very difficult to contend with. Borax, kerosene, sponge soaked with sugar, etc.

Fleas—Occasionally found where there are carpets. Alum powder is useful.

Clothes Moths—Woolen blankets, clothing made of wool, etc. Care should be taken before storing.

Mosquitoes—Where mosquitoes are prevalent windows should be screened. Stagnant water in light wells, etc., are favorite breeding places. Kerosene is helpful if water cannot be controlled.

Flies—Screens, covers for garbage pails, etc., will control these pests.

Carpet beetles—Rare unless there are carpets that are tacked down. Might occur in hospital residences. Kerosene is useful.

Linen Department

The linen department should be a light, airy room and be equipped with ample shelves, and large tables. It should not be consigned to the basement. It should be easily accessible to the laundry, but not necessarily connected with it. The person in charge of the linen room should be responsible for the proper sorting, marking and storing of hospital linen. She must also be responsible for its proper issuance. Linen which is in service should be carefully watched for needed repairs. If linen is issued on requisition, these should be checked by the supervisor. Inventory must be kept and she should

periodically check the floor linen closets to see that linen is not being hoarded on the floors. It is also her duty to see that the linen is properly marked.

If the hospital is large, there will be several people employed in the linen room. Orderlies will deliver linen to floors, seamstresses will mend and repair, a helper will mark linen by hand or machine. The housekeeper should see that the duties of each of the personnel are routinely scheduled. If the hospital manufactures many of its standard linen requirements, the number of seamstresses will be increased.

Linen Supply per Bed

Ward (average clean case)	*Private Room*
1 sheet	2 sheets
1 drawsheet	1 drawsheet
1 pillowcase	2 pillowcases
1 bath towel	1 spread
1 face towel	2 bath towels
1 washcloth	2 face towels
1 gown	2 washcloths
	1 gown

Incontinent cases, etc., as well as obstetric cases, will require a larger amount of linen.

Selection of Various Supplies

Cotton is the basis of the majority of hospital "linen" needs. In selecting articles, it is well to keep to standard sizes, and the fewer the better. Sheets, pillowcases, towels, cotton blankets, etc., should be ordered on specification whenever possible. There are many grades of all these articles on the market, and the hospital administrator should know what he wants before he orders. Trademark brands are not always the same. Careful watching of market conditions will often result in saving money.

In large institutions where the linen usage is large, including doctors' gowns, patients' gowns, etc., it might be economical to manufacture many items in the institution. Careful cost accounting is necessary to be sure that there is an actual economy. Commercial competition is very keen, and unless the institution can command low-priced labor, it is doubtful if hospital production can be more economical than careful buying. In addition to labor costs, the capital expense of sewing machines must be taken into consideration. This is a problem that the individual institution must carefully solve for itself.

Standardization of Supplies

The Bureau of Standards has worked out many problems with the aid of the manufacturer and consumer. They have standardized sheet sizes, pillowcase sizes, blanket sizes, etc., and thus removed from the market many of the odd sizes heretofore available. This has decreased the manufacturing cost of the remainder considerably, and hospitals should adhere to these sizes in cooperation.

Very few hospitals go into minute detail if they order by specification. Probably the most demanding in detailed specifications are the United States Army and Navy, when ordering supplies. These specifications are available for a small charge from Superintendent of Documents, Government Printing Office, Washington, D. C.

Linen Control

All hospital linen should be marked at the time it is put into circulation. This can be done by stitching in the name of the hospital, department, etc., or marking with ink by hand or machine. The date the linen is put into circulation should always be included in the marking. If the system is such that linen belongs to a given department, the name of that department is also marked on it. Linen should always be marked in a uniform place, and in such a way as to be visible when the article is folded.

Distribution of Linen

There are at least six methods of distributing linen. The size of the hospital, the amount of linen in circulation, the training of the various persons in its use, and the physical set-up of the particular hospital, all must be taken into consideration before adopting the "best" system.

System No. 1. Central linen room. No reserve stock of linen on floors. Necessitates much travel to and from linen room. Might be all right in small hospital.

System No. 2. Establishment of definite standard for each hospital unit. Linen marked for this unit. Linen must be counted on floor before and after going to laundry. Requires much labor and large supply of linen in circulation in order to meet peak loads.

System No. 3. Linen uniformly marked. Counted on the floor and placed in bags and sent to the laundry. Nurse in charge requisitions needs direct from laundry for following day's demand. This system throws extra work on nurses. Carelessness on floor—hoarding of linen—extravagance in use of linen—all defeat system.

System No. 4. Exchange of soiled linen for clean linen. Linen must be counted on floor and laundry slip made out. Requires extra labor by nurses—wrong counts—bickering.

System No. 5. Count out of ward, into laundry —out of laundry, into linen room—out of linen room, back to ward. Too much counting. Accuracy of counts debatable.

System No. 6. All soiled linen to laundry from floors without a count. Laundry to linen room. Linen room issues to wards on daily requisition. Simple, but no check on linen loss. Floor linen closets must be watched for hoarding.

Controversy over counting linen?

Is too much counting worth the effort?

There should be a careful routine analysis made of ward usage and demand as well as an administrative supervision of usage in order to conserve linen. An oversupply of linen on a floor is conducive to extravagant use. The approval of linen requisitions by the training school office will not in itself correct this evil.

Salvage of Linens

Torn or unserviceable linens may be cut out of circulation either in the laundry or, if all clean linen is sent from the laundry to the central linen room, in the linen room. Irrespective as to where the damaged piece is picked out, it should always be sent to the linen room for salvage, and not simply made into rags by the person finding it. Large sheets can be cut down and various other articles made, if the sheet be repaired. Bath towels can be made into wash cloths. Careful salvage, properly planned, can save many dollars, but it has to be done in one place and under supervision.

All discarded linen should be inspected by the supervisor for its disposition.

Linen Storage

New linen should be stored in a clean, dry place, and kept under lock and key by the storekeeper, and issued to the linen room on requisition properly authorized. Depending on the system of distribution and control, linen in the linen room should be on clean shelves, properly marked, and ready for issue. On the floors, the linen for daily use should be in separate closets, used for keeping nothing else. The ward linen closets should be ample in size and well-ventilated, and equipped with adequate shelving for convenient sorting. Floor linen closets should be inspected daily by the nursing office when rounds are made, and the hoarding of linen by floor nurses severely discountenanced.

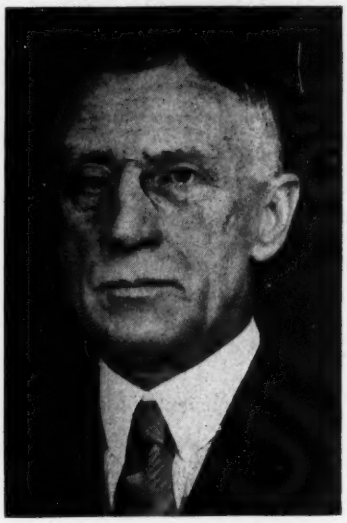
Linen Inventory

This is a difficult task unless constant counting is demanded. A perpetual inventory by a central linen room necessitates much clerical labor. Is it worth it?

A periodical inventory should be made by all wards, and the linen room. This is useful for comparative purposes, and is a fairly accurate method of check-up. A record of all discarded linen should be kept, and should tally with new linen put into circulation. The question of theft is a difficult one and each institution will have to solve its own problem.

Obituary

Daniel D. Test, 68, former president of The American Hospital Association, died December 1 at the Pennsylvania Hospital, Philadelphia, where he had been superintendent thirty-six years of the forty years he was associated with that institution, until his retirement in 1931.



DANIEL D. TEST
Born March 28, 1867. Died December 1, 1935.

A dominant figure in hospital affairs of the nation, Mr. Test was an authority on institutional design and administration.

He was one of the founders of The American Hospital Association and was active in organizing the Pennsylvania and Philadelphia Associations. He was elected president of The American Hospital Association in 1904, following two terms as secretary and was also the first president of the state and city groups. He has held many committee appointments in all three and had been a trustee of The American Hospital Association for a number of years.

In addition to those honors Mr. Test was a trustee of the Dunwoody Home and a board member of Westtown School. He was a lifelong member of the Society of Friends.

Poor health caused his retirement in 1931 though he continued as consultant to both the Pennsylvania and the Bryn Mawr Hospitals.

At the annual meeting of The American Hospital Association in Toronto in 1931 the Association presented him with a silver plaque engraved with the following text:

"To Daniel D. Test, a charter member of this Association, a friend, comforter and counselor to every patient who entered the wards of his hospi-

tal and for nearly 40 years Superintendent of the Pennsylvania Hospital, Philadelphia, Pennsylvania.

"Lewis A. Sexton, President,
and the Board of Trustees,
American Hospital Association."

Mr. Test was born March 28, 1867, near Salem, Ohio, his family having moved there from Pennsylvania. He was a direct descendant of John Test, the first High Sheriff of what is now Philadelphia and its surrounding counties. He was a member of the Colonial Society of Pennsylvania. He went to Philadelphia to study pharmacy, maintaining himself at the same time with a clerkship in the Pennsylvania Hospital. His duties and responsibilities there increased rapidly and eventually he discontinued his studies to devote himself to hospital administration.

The survivors are his widow, Mary B. Test, three sons, Alfred L., of Philadelphia; Dr. William B., of Rochester, N. Y.; Daniel D., Jr., of Easthampton, Mass., and four grandchildren.

Modernization Credit as It Affects Hospitals Fourteen Answers to Questions

B. C. POWELL

Manager of Financial Relations, Federal Housing Administration, Little Rock, Ark.

1. Q. Who may secure a loan?

A. Any one whose income will enable him to pay back the loan conveniently in a reasonable period of time and who can meet a few other simple requirements. (Corporations, partnerships and associations may borrow on the same basis as individuals.)

2. Q. Who loans the money?

A. Banks, building and loan associations, finance companies, and other financial institutions approved by the Federal Housing Administration. The money is not loaned by the Government. It is all loaned by private concerns. However, because of the Government insurance plan, these concerns are able to lend larger amounts, and at lower rates, and for longer periods, than otherwise would be possible.

3. Q. Where does the borrower apply?

A. To his local approved bank, building and loan association, or other financial institutions, or the concern that gives estimates of cost.

4. Q. For what may loan be used?

A. To repair, alter, or improve a home, farm, store, church, school, manufacturing plant, hotel or any other type of property, or to purchase and install approved equipment or machinery in any type of property.

5. Q. How large may the loan be?

A. The loan may be for as much as $50,000 in the case of apartments or dwellings designed for two or more families; or in the case of manufacturing plants, industrial plants, colleges, schools, **hospitals,** orphanages, hotels, office buildings, business buildings and commercial buildings. In the case of other types of property not mentioned above, such as single-family homes, the loan may be for any amount up to $2,000.

6. Q. For how long may the loan be made?

A. For any number of months up to five years. Financial institutions are encouraged not to lend for a longer period than appears desirable, or for longer than the useful life of the repairs, improvements, or installations which the loan is used to purchase. (Building and loan associations and similar institutions may make loans for even longer than five years if they choose. However, they are covered by the Government insurance for only the first five years.)

7. Q. Is a mortgage or other security required?

A. On property improvement loans up to $2,000 a mortgage or other security is generally not required by the lenders. Most lending institutions, however, require chattel mortgage or conditional sale security in connection with sales of appliances. On loans in excess of $2,000 a security in a satisfactory form is a general requirement of the lenders, both in respect of loans for improvements and for the purchase of equipment and machinery.

8. Q. How is the loan repaid?

A. In equal monthly installments except that farmers who receive their income seasonally from

crops and livestock, are permitted to repay their loans seasonally.

9. Q. Can a loan be made for a property that is already mortgaged?

A. Yes. It is optional with the lender whether he require that payments on the mortgage and taxes be up to date.

10. Q. What else is required?

A. The only other important requirement is that the borrower agree to spend the money for purposes provided for by this plan.

11. Q. How much does the loan cost?

A. The interest rate and other charges which a lender may make on any loan are matters of arrangement between the lender and the borrower. However, the total charges, including interest, may not exceed the limit prescribed under the regulations of the Federal Housing Administration. The maximum permitted rate is 5 per cent discount and the lowest ever established for general use on installment credit. Your bank may be willing to make you a lower rate, especially on large loans.

12. Q. May the loan be paid back at any time?

A. Yes. The borrower may make as many advance payments as he wishes. A reasonable rebate will be allowed when the loan is paid off in full ahead of time if the charges for the loan have been collected in advance.

13. Q. What if a payment is late?

A. If it is more than 15 days late, the lender may collect a late charge to cover his extra costs, but not to exceed five cents for each dollar on the payment that is late, or more than $5.00 for any one late payment; or the lender may charge interest on overdue payments at a rate not to exceed the maximum legal rate permitted in the State. It is most important that borrowers make their payments promptly. If they are continually late, the lender will, of course, take legal steps to enforce collection.

14. Q. What are the advantages of this insured modernization credit plan?

A. It enables people to make needed repairs or improvements to their homes or other property and to use and enjoy these improvements while they are saving the money to pay for them. If a person can pay cash for these improvements, the Federal Housing Administration urges him to do so. The Administration urges no one to borrow money unless he can fully afford to do so and except for such a worth while purpose as the protection and improvement of property and equipment.

In addition to the foregoing, may I remind you that the real heart of the National Housing Act is known as Title 11, or the single mortgage system, which deals with the permanent method of home financing problems, both to refinance present indebtedness as well as the building of new homes for qualified property owners through a single amortized insured mortgage, up to 80 per cent of the valuation if necessary, on a basis satisfactory to both lender and borrower, limiting the amount of financing to $16,000 for a maximum of twenty years.

Cleveland—1936

THE AMERICAN HOSPITAL ASSOCIATION will hold its thirty-eighth annual convention in Cleveland, September 28 to October 2, inclusive. Centrally located, within an overnight's ride of seventy per cent of the hospitals in Canada and the United States, with its twenty-six modern hospitals, Cleveland offers unusual attractions for our hospital people. Its fine hotels, wonderful transportation facilities, railroad trunk lines, airplane routes, steamship lines, and the best highways in the middle-west, all make Cleveland a popular convention city. The convention hall is modern, well arranged, and within a five-minute walk of the leading hotels. It is located on the lake front—one of the prominent building features of Cleveland's Civic Centre.

The hospitals in Cleveland and the Cleveland Hospital Council will stage one of the finest educational exhibits we have ever had, and their arrangements for the entertainment of their guests during Hospital Week will insure the convention delegates and their friends a delightful visit.

Every hospital in the United States and Canada should arrange to send their representatives to the Cleveland Convention. The programs for the different sessions will be so arranged as to appeal to every one interested in our hospitals. There will be reduced transportation rates on all railroad lines. It is suggested that hotel reservations be made early.

The following associations will meet with the American Hospital Association during the week:

The American Protestant Hospital Association
The American College of Hospital Administrators
The American Occupational Therapy Association
The National Association of Nurse Anesthetists
The Children's Hospital Association of America
The Medical Social Workers

Legal Decisions of Interest to Hospitals

The cases selected for comment in the first issue of "Hospitals" reflect the accepted doctrines now extant relating to the liability of hospitals for the negligence of their servants or employees. The court decisions here appearing, as well as those to be commented upon in future issues, are chosen with the view of presenting current hospital law. Another factor determinative of the case material to be used is that of the situation presented. Search for decisions illustrating every possible phase of hospital law will be made, and with particular reference to situations which may confront the hospital administrator in his everyday routine of handling the problems of his institution.

This article is confined to consideration of charitable institutions and their liability for injuries to the person of the patient caused by the negligence of personnel employed by the hospital. Before undertaking to comment upon the individual cases here appearing it will be well to review briefly the law governing the liability of charitable hospitals for their torts. One of the earliest court decisions in this class of cases was

McDonald v. Massachusetts General Hospital, 120 Mass. 432 (1876). Plaintiff sued for injuries alleged to have been sustained by reason of negligent and unskilful surgical treatment rendered by defendant's servants. The defendant hospital was incorporated under the laws of Massachusetts, as a charitable institution, its funds being derived from charitable bequests and donations. Plaintiff entered the hospital as a non-paying patient, having had his thigh broken in a fall from a building on which he was at work. The fracture was reduced by a house pupil (intern). Plaintiff offered evidence to prove that he had objected to the house pupil administering to the fracture. The patient claimed that the bone was not properly set. The lower court ruled in favor of defendant, which ruling was affirmed on appeal.

The Supreme Court of Massachusetts held that a corporation "the object of which is to provide a hospital for sick persons, which has no capital stock and no provision for making or paying dividends, deriving its funds from donations, and *holding them in trust* to promote the purposes of the hospital" is a charitable institution; and that if such a corporation has exercised due care in the selection of its agents, it is not liable for injury to a patient caused by the negligence of such agents. It was further held that even though the house pupil had acted without authorization in setting the plaintiff's thigh, still the hospital would not be held liable for such unauthorized assumption of responsibility. This decision while an early one is regarded as a leading case upon the question of liability of charitable hospitals for the torts of their employees.

However, it is to be noted that the Supreme Court of Massachusetts engrafted a qualification upon the rule announced in the *McDonald case, supra,* in

Rosen v. Peter Bent Brigham Hospital, 235 Mass. 66, 126 N. E. 392. Here the Court said "The inevitable result of our own decisions is to relieve a hospital from liability for negligence of the managers *in selecting incompetent subordinate agents* as well as for the negligence of such subordinate agents selected with care." In so holding, the Massachusetts Court provided a precedent for the Wisconsin Court in the *Schumacher case,* noted hereafter, which holds in a sweeping decision that the hospital cannot be held liable even for the negligence of its officers in selecting incompetent employees.

Mr. Justice Cardozo in **Schloendorf v. The Society of the New York Hospital,** 211 N. Y. 125, 105 N. E. 92 (1914), pointed out that the theory that funds of a charitable hospital are held in trust, as a basis for denial of recovery of damages against the hospital, was no longer law in New York. In its stead the Justice supplied the waiver theory to deny recovery in the *Schloendorf Case, supra.* This theory maintains that one who accepts the benefits of charity impliedly agrees not to hold the benefactor liable in the event that its negligence, or the negligence of its servants, causes injury to him.

A later case, **Hamburger v. Cornell University,** 240 N. Y. 328, 148 N. E. 543 (1925), decided by Mr. Justice Cardozo, casts doubt upon whether this same waiver theory advanced by him in the *Schloendorf Case, supra,* is impregnable; for in the *Hamburger Case,* the Justice shows that acts of the New York courts appear to be against the waiver theory.

It is readily seen that the courts are willing to deny recovery for negligence, but they are widely divergent as to how to proceed in barring relief from the alleged negligence of a charitable hospital or its servants.

The cases expounding what seems to be the overwhelmingly majority doctrine, i.e., that a charitable institution is not liable for its negligence, are divergent as to the theory upon which exemption from liability is to be based, but are in agreement as to the result. Examination of the court decisions dis-

closes that some four grounds are advanced to favor the non-liability of charitable institutions.

1*st*. The Waiver Theory. It is first said, in absolving the hospital from the consequences of its negligence, that when a patient enters a charitable hospital he becomes a party to an implied contract, that in consideration of his accepting the benefits of the charity, he releases his benefactor from liability for any claim arising out of injuries that he may receive as a result of the negligence of the employees or servants of his benefactor.

2*nd*. The Sanctity of Trust or Endowment Funds. Another line of decisions, in arriving at a result exempting the hospital from liability, has been reasoned on the basis that funds used in the maintenance of the charity are a part of a trust established for the purpose of assisting mankind in combating ills of the body, which purpose is entirely charitable, but which does not contemplate the payment of claims for damages of the beneficiaries of the charity, founded upon the negligence of its employees.

3*rd*. A third theory sustaining exemption from liability is that rule which holds that the relationship of the employee to his employer hospital is not such as will admit of the application of the maxim *respondeat superior* which if applied would require that the hospital be held liable for the negligence of its employees in causing injury to patients.

4*th*. The broad ground of public policy. Finally, many courts follow a sound and convenient doctrine by announcing that it is contrary to public policy to permit funds donated by reason of charitable, beneficent dictates, and employed in caring for the sick and the indigent, to be used in payment for damages which are the result of the negligence or carelessness of a servant of the charity.

Many courts in their decisions favoring exemption have added a qualification or exception to the rule of non-liability in holding that the charitable hospital shall not be liable for the negligence of its servants, provided that those charged with the duty of selecting employees for the hospital have used reasonable care in making such selection. The decisions examined, with two exceptions, have not passed upon this exception to the rule, because of the fact that the negligence at issue was that of the servant, and further because of the difficulty confronting counsel in proving that the particular administrative officer did not use due care in the selection of the employee whose carelessness provided the ground for the suit at law.

The decisions digested and commented upon, which have held the hospitals liable, are for the most part recent cases, and it is believed present fact situations of interest.

Emory University v. Shadburn, 47 Ga. app. 643, 171 S. E. 192, affirmed in ... Ga. ..., ... S. E. ... (1935). Ethel Shadburn was admitted to defendant private hospital and during her stay became delirious. It was given in evidence that this condition became known to the hospital by reason of plaintiff having repeatedly screamed and having directed violence against members of the nursing personnel. While in a violent stage of the delirium the patient succeeded in jumping out of a window. The resultant injuries were of a serious nature, for which suit was instituted to recover damages. In affirming a judgment of the City Court of Decatur, the Court of Appeals of Georgia held that defendant was liable for its negligence in failing to guard the patient when it knew of the delirium.

It further appeared that the patient had employed a special nurse, and that the accident had occurred when this nurse was off duty. There was also evidence to the effect that the patient *paid the hospital* for the nurse's services. She in turn received her fees from the hospital. Finally, in an effort to escape imposition of liability, defendant proved that it was a charitable institution.

The result of this decision is that the hospital was held liable for neglect of its duty to provide some effective safeguard to protect the delirious patient from just such accidents as above described. Upon the evidence presented the inference follows that the hospital was negligent when, after knowing of the delirium, it failed to take active measures to guard the plaintiff from the consequences of a temporarily deranged mind.

Another question was that concerning the admissibility in evidence of a chart, kept by the hospital, showing the statements made by the patient during her delirium. In answering the contention of counsel for defendant that the chart was not admissible, the Court of Appeals held that the chart was admissible inasmuch as certain of the employees of the hospital were required to keep the chart as a part of their regular duties in the hospital.

City of Shawnee v. Roush, 101 Okla. 60, 223 Pac. 354 (1924). Plaintiff Inez Roush sued the City of Shawnee for injuries resulting from the negligent administering of an enema by a nurse employed in a hospital operated by the City. A judgment was recovered by the plaintiff, and on appeal, the Supreme Court of Oklahoma affirmed this judgment.

The evidence showed that the solution used for the enema was so hot as to severely scald the patient. Upon trial of the case the City defended on the ground, among others, that the hospital was a charitable institution. The Court, on appeal, proceeded to an answer of this contention by inquiring

into the powers of a city. There are two classes of powers—legislative, public, governmental; and proprietary—the latter being given to the city for the benefit of its inhabitants. Where the power is of the second class, i.e., proprietary, a city cannot be absolved from liability for the careless execution of such power on the ground that such power is related to its governmental functions.

It follows, then, that if the City is negligent in the performance of this second function, it is liable to respond in damages.

The Supreme Court of Oklahoma next inquired whether the fact that the hospital was operated as a charity would prevent recovery by the plaintiff. In holding that the so-called "trust fund doctrine" was not a defense, the Court followed an Alabama case,

Tucker v. Mobile Infirmary Association, 191 Ala. 572, 68 So. 4, holding it to be impossible to absolve a hospital from the consequences of its negligence merely because it was not operated for profit. The attitude of the Oklahoma court is illustrated by the following quotation from the syllabus of its opinion. "There exists no reason in law for the courts to create an exemption of a person or association from liability for negligence of servants of such person or association, merely because such servant is employed by such master in the operation of an institution for purposes other than profit or gain."

The case just noticed does not stand alone as a precedent for the liability of hospitals under circumstances of this kind. In an earlier case,

Mulliner v. Evangelischer Diakonniessenverein, etc., 144 Minn. 392, 175 N. W. 699 (1920), the plaintiff's decedent, suffering from pneumonia, was admitted to defendant's hospital. A delirium followed during which the patient was, as in the *Shadburn Case,* left unattended. Likewise, the patient here jumped from a second story window. The fall was fatal, resulting in a law suit instituted by the decedent's personal representative. Here the Minnesota Supreme Court refused to follow the rule exempting charitable hospitals from liability, and held the defendant liable for its negligence in failing to guard the patient during his delirium. It was recognized by the court that the rule applicable to cases of this sort required the hospital to use reasonable care to guard against the self destruction of a patient, especially where the authorities of the institution know that the patient is temporarily out of his mind. In this case a nurse testified that she would have watched the deceased more closely *had she not been overburdened with work on the floor.* A further point in evidence was that the window in the patient's room had been left open five or six inches. Finally, it was shown that the deceased had broken loose from his room upon two occasions, the female nurses being unable to subdue him. Under the facts shown it seems patent that the hospital was grossly negligent. It was said by the Minnesota Supreme Court that: "Men are not exempt from the consequences of negligence though on a mission of mercy." Again, the court said in concluding, "We are of the opinion that public policy does not favor exemption from liability."

In these three decisions commented upon above, the courts have held the hospital liable for the negligence of its servants. In the cases which follow the Courts have ruled that the hospitals are not liable.

In **Fetzer v. Aberdeen Clinic et al.,** 48 S. D. 308, 204 N. W. 364 (1925), it was held that the hospital was not liable for injuries suffered by a patient while delirious. Here the patient entered the institution suffering from appendicitis. The sixth day after the appendectomy, while in a delirium, he jumped from the window of his room on the third floor and was found unconscious.

It was shown that the patient had suffered fractures and reopening of the incision as a result of the fall. In a decision favoring the hospital the South Dakota Supreme Court held that the hospital authorities were not required to take any precautions other than those which would be taken by reasonable persons in the same circumstances. In other words, defendant was not required to anticipate that a delirious patient might succeed in opening and jumping from a window. Further, the court intimated that it would require evidence that the plaintiff was possessed of a tendency to inflict self injury, or of an intention to escape from the building, in order to make out a case against the hospital.

Baylor U. v. Boyd, 18 S. W. (2) 700 (1929) (Tex. Civ. App.). Walter Boyd sued the defendant hospital of Baylor University for injuries claimed to have resulted from the negligence of a hospital orderly in placing a hot water bottle next the plaintiff's wrist. The lower court for Dallas County rendered judgment for the plaintiff in the sum of $950.00, which judgment was reversed on appeal to the Court of Civil Appeals of Texas.

The Texas court first inquired whether Baylor University was a charitable institution. It was shown that the University and Hospital were owned and operated by the Baptist Church in Texas, as charitable enterprises. Clearly, then, a case of this sort would be controlled by rules of law applicable to charitable institutions, which exempt such institutions from liability in cases involving injury to the patient.

The case under consideration reaffirms the definition of the hospital as a public charitable institution,

found in the majority of authoritative sources: "A corporation, the object of which is to provide a general hospital for sick persons, having no capital stock nor provision for making dividends or profits, deriving its funds mainly from public and private charity, *and holding them in trust* for the purpose of sustaining the charity, conducting its affairs for the purpose of administering to the comfort of the sick, without expectation or right on the part of those immediately interested in the corporation to receive compensation for their own benefit, is a public charitable institution." 5 Ruling Case Law 373.

It is generally said that a charitable institution is not liable for the negligence of its employees unless it failed to exercise reasonable care in the selection of them, or unless it retains them after knowing of their carelessness. This rule is squarely followed by the Court of Civil Appeals of Texas.

Southern Methodist Hospital and Sanitarium of Tucson v. Wilson, 46 P(2) 118 (1935). Max E. Wilson, an infant, sued through his guardian *ad litem,* Beryl E. Wilson, to recover damages for personal injuries sustained as a result of the negligence of the defendant. A judgment for plaintiff was reversed, and the case was remanded to the lower court.

Plaintiff was born in the defendant institution, and was taken from the room in which he was born to the nursery. While in his bassinett he suffered a severe burn from contact with a hot water bottle. This injury was shown by expert testimony to be of such magnitude as to practically impair permanently infant plaintiff's physical condition.

The Arizona court states the rule to be that a charitable hospital is exempt from liability for its torts, or those of its servants or employees *if it has used due care in the selection of such servants or employees.* This rule was considered by the Wisconsin court in the *Schumacher case, ante,* and the decision reached was that the hospital would not be liable even for negligence in the selection of its employees.

The instant case, like others citing the above rule, is concerned only with the negligence of the servants, and not with the negligence of those in authority who are entrusted with the duty of selecting those servants.

The case under consideration is noteworthy in that it sets forth the general rule that the liability of a charitable hospital is *not* affected by the fact that a patient has paid for services rendered to him, and that the test of liability deals with the question whether the institution is maintained for profit or for the furtherance of charitable purposes, the rule of exemption from liability applying in the latter case.

Shane v. Hospital of the Good Samaritan, 37 P. (2) (1066), (1934). Plaintiff Beverly R. Shane, an infant, by Harry Shane her guardian *ad litem,* sued defendant hospital which appealed from an order granting plaintiff's motion for a new trial. The District Court of Appeal, Second District, Division 1, California, reversed the order and remanded the case with instructions to the trial court.

The injuries complained of were alleged to have been suffered by plaintiff on the day of her birth, as a result of the negligence of a nurse. In answering plaintiff's contention that the hospital should be held liable, the California court sets forth the rule, before noticed, that the charitable hospital is not liable for injuries sustained as a result of the negligence of a nurse where the hospital used due care in selecting her for employment.

In following this rule the court aligns itself with those jurisdictions which sustain the qualification "if the hospital has used due care in the selection of the employee."

Of the cases read, the *Schumacher case* and *Rosen case* appear to be the only cases holding squarely that the hospital is not liable even where its administrative officers have been negligent in the selection of employees and servants whose carelessness has resulted in injury to the patient.

Schumacher v. Evangelical Deaconess Society of Wisconsin, 260 N. W. 476 (1935), (departure from general rule). Amanda Schumacher sued defendant society for injuries alleged to have been received by reason of negligent care and treatment in a hospital conducted by it. The plaintiff was a pay patient in the defendant's charitable hospital for treatment for injuries suffered in an automobile accident. Plaintiff's complaint was founded upon the negligence of the defendant in selecting incompetent and unskilled employees whose negligent care and treatment allegedly caused plaintiff's injuries. A judgment for defendant was affirmed on appeal.

This case presents the question whether a charitable hospital is exempt from liability for negligence in the selection of its interns, nurses and other servants. Earlier Wisconsin cases affirm the proposition that a charitable hospital is not liable for the negligence of its employees.

Morrison v. Henke, 165 Wis. 166, 160 N. W. 173. On the other hand, a respectable number of authorities state that "in the absence of any *negligence in their selection,* charitable hospitals are not liable to their patients for the torts of their servants," thus engrafting a qualification upon the rule of non-liability for tort.

The Wisconsin court refuses to follow this exception to the rule, and in so refusing, points out that in the cases cited as sustaining this exception to the rule of non-liability, the cases turned upon the question of the *negligent acts of the employees,* so that the qualification announced, that the charitable hospital is not liable if it has used care in the selection of its servants and employees, not being necessary to determine the legal questions presented in those cases, is mere *"obiter dictum"* and of no control in deciding the instant case.

It follows from this decision that, under Wisconsin law, a charitable hospital is to be regarded as exempt from liability to a patient for the negligence of its chief administrative officer in selecting employees who are either incompetent or negligent and also, for the negligence of such employees in administering the needs of the patient.

Hospital Painting

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THERE HAS NOT been very much published about paint and painting in the hospital literature, and information from other sources does not always apply to hospitals. Therefore, it has been necessary for the hospital administrator to accumulate his own information through experience or to seek definite information from his colleagues who, through special interest and experience, know something about the subject. The data given in this paper are selected with the aim to help in economical hospital maintenance. For that reason attention is given to the simpler facts concerning painting, and no attempt is made to cover the entire field completely. Considerable attention is given to the preparation for painting and the later care of the painted surface.

Preparing the Surface

Many of the causes for the lack of hiding power, peeling and "alligatoring" of good wall paint are due to poor preparation of the wall surface. Emphasis should be made that proper preparation is the very foundation of the work and it is not reasonable to expect a good job without it. If it is slighted too much, time and effort is wasted later on in an attempt to remedy defects and hide imperfect places in the plaster which should have been filled before painting.

New Plaster, Smooth Finish. — Ordinarily the plasterer has left plaster splashed on corners and edges of wood trim and there are occasional rough places. The excess plaster should be cleaned off, and any rough places on the wall sanded down smooth by rubbing the rough places with fine sandpaper on a block of wood. Care should be taken in this sanding down process that the glazed surface of the plaster is not cut through. If it is rubbed through, a suction spot will appear flat on the finished coat, unless coated with shellac and an extra coat of paint. Blisters in the plaster, due to careless mixing of the material, should be cut out and filled with putty. Openings and cracks around doors, window casings, and corners should also be filled with putty. When all filled and repaired patches are dried, they should be coated with thin shellac, so as to produce a surface on these patches which is equally hard and as smooth as the surface of the plaster. To prevent the patches which have been shellacked from showing up on the finish, a coat or two of flat paint should be brushed over the fillings.

New plaster walls should be left unpainted from three months to one year, until the plaster matures. The reason for this is that free lime (alkali spots) is present in new plaster until it has matured. These alkali spots have a tendency to destroy the binder in paint, and to cause a change in some colors to fade, causing flat spots. The painting of walls is always much more satisfactory and permanent if the walls are matured, and perfectly dry when the paint is applied. If the walls and ceiling have accumulated dust and smoke, they should be washed. However, at times it is desired to speed up painting, and it is then necessary to neutralize any active alkali spots by washing the walls with the solution of zinc sulphate crystals. This may be made by dissolving four pounds of zinc sulphate crystals in one gallon of water. The free lime in the plaster is converted to Calcium Sulphate (Gypsum), and Zinc Hydroxide is precipitated. It is also a good practice to wash new walls, even when mature, with the zinc sulphate solution to insure that all alkali spots are neutralized.

Often new plaster on hard finished walls is too soft and it chalks off excessively. The surface can

be made to dry harder if water is applied generously with a brush or sponge until the surface is soaked. The hardening process usually takes four or five days' time. Some of the newer types of "fast setting plasters" dry too quickly, leaving hair lines. There is no satisfactory treatment for these hair lines. They are too small and numerous to be filled individually, so the best treatment is to stop suction from the cracks by coating the wall all over with a coat of boiled linseed oil, with which about one-quarter turpentine has been mixed. They may be given a coat of shellac and an extra coat of flat paint.

Painted Old Plaster. — The preparation of old walls is often accomplished by simply washing to remove grit and smoke. Whether the old wall may be simply washed or whether the paint first requires much scraping, calls for the exercise of good judgment, based upon experience. Emphasis should be put upon the importance of properly preparing old walls, more so than new walls, for the reason that, as a rule, there is more cutting out and filling of cracks, holes and damaged places. To attempt to paint an unwashed wall is uneconomical, for the reason that more paint is needed to cover the smoke and grit.

Washing Walls.—The first washing walls receive may be before they are painted. Washing not only removes the dirt and smoke which accumulates while the new plaster is maturing, but wetting the plaster will cause any soft spots to set harder, thus preventing chalking. Thereafter walls should be washed as often as the accumulation of dirt or sanitation requires.

The actual washing might seem to be quite an ordinary procedure, but it requires some study. To prevent streaks, which are caused by water and solutions running down the drying wall below the place where one is working, it is best to wet a section of the wall, starting at the bottom and working up, beforehand. Washing should then begin at the top of the wall, so that the solution will run down the wet wall and have little streaking effect. Other streaks may be prevented by being certain that once the dirt is moistened, the wall is kept wet until the dirt is rinsed off.

Care should be taken that the wall washer does not rub hard, and thereby push the grit into the paint, especially into the flat paint. He should use a solution to soften and loosen the dirt and then rinse it off with clear water. At least two sponges should be used, one for the cleaning solution and one for the rinsing. It is important that rinsing should be completed on one section of the wall before a new section is started, for the reason that the alkali solution will dry on the surface and damage the finish of the paint.

Good brands of enamel paint, properly washed, have lasted up to ten years, with repeated washings as often as three times a year, with an obvious saving in the cost of repainting.

In general, there are no specific formulae. A neutral soap is the safest possible agent that one can use, provided it will remove the dirt. Behind radiators and where smoke has accumulated, it is usually necessary to add sal soda to the solution.

The following solution may be used for washing flat paint:

½ ounce powdered soap (neutral)
½ to 1 ounce sal soda
10 quarts warm water

The following solution may be used for enamel paint:

½ ounce powdered soap (neutral)
½ ounce sal soda
10 quarts warm water

Starching Painted Walls.—This protects the walls by catching dirt and smoke. The starch is easily washed off, bringing the dirt that it has caught along with it, and leaving the finish of the paint practically undamaged. Starch is not usually applied to a freshly painted enamel wall, for the reason that starch does not adhere very well to the high gloss enamel finish, although it can be applied and stippled with a stippling brush and will give a very good effect. Ordinarily it is best to wait until the wall has been washed once. A common starch formula is as follows:

⅛ pound of corn starch, mixed into 2 quarts of cold water. Then add about 2½ gallons of hot water, mixing thoroughly and boiling twenty minutes, stirring constantly to avoid burning. Do not apply hot. The starch is applied with a calcimine brush.

Economy may be effected both in painting and wall washing by using a dado line placed higher than an ordinary individual will usually touch the wall with his hands. This is done so that there will be no smears above the line. A convenient place for the line is at the level with the meeting rails of the window sashes, which is about six feet from the floor. The saving is effected in that the lower part of any wall becomes more soiled than the upper part, needs washing and painting more frequently. If there is no dado line, the whole wall has to be washed or painted. With the line it is often necessary to wash or paint only the wall below the line. By the use of a slightly different color shade, patches, which are more often necessary below the line, may be made and repainted without the need of painting above the line. The lower part of the wall should be of a slightly deeper shade, and the

dado line 1½" wide and usually two shades darker than the lower color.

Scaling Paint.—When paint cracks and scales, there is always a question whether the surface is safe to paint over again, and good judgment is required in making the decision. The cause of paint scaling is often water, which has leaked into plaster and destroyed the adhesion of the paint film. In other instances, scaling can be traced to the use of glue size which is too strong. Glue size ought never be strong enough to form a solid film, but only strong enough to seal the plaster. Often, especially with flat wall paint, too many coats are applied during the process of repainting, so that the original bond will let loose. Large areas must be removed with either a blow torch, which burns off the old materials, or the use of a liquid paint remover. Damage to the glazed surface of the plaster should be treated as described elsewhere in this paper.

Applying the Paint

From the standpoint of economy and administration, the Maintenance Department should have charge of the painting. One or more intelligent men may be obtained who can do excellent painting at less cost than an outside painter. In addition, they can be taught to make minor repairs to the walls, do small jobs of plastering, take care of screens, putting them up in the spring and taking them down in the fall. They can also paint any signs needed around the hospital. These men, being permanent, constitute the nucleus for enlarging the force whenever considerable painting is necessary. It is essential that they learn to mix paint in the colors ordinarily used in the hospital.

Brush Work.—A good brush hand can paint 125 square yards in a day on a smooth surface, using flat wall paint. "A large utility company has estimated that one man, working eight hours, can cover 150 square yards, using enamel paint. This includes flat surfaces and trim, as well as sanding where needed. The standard 4" brush is used and the preparation of the walls for painting is not included."

Spraying Paint.—Flat and enamel paint may be sprayed. The consumption will be increased from 5 per cent to 10 per cent, but two men can cover a larger area per day than two men with brushes. However, spraying the paint is a relatively new procedure and, although it has many good points, it has not been generally adopted as a method of painting. Perhaps one reason for this is union limitation on spraying in some cities, and the natural fear of the painter that he will be displaced. If there are many openings, the cleaning up after spraying may be considerable and reduce savings that spraying might otherwise make. It is important that the men be furnished good equipment and a reasonable amount of time to produce good results.

Sizing

The purpose of sizing is to seal up pores in the surface of the plaster so as to stop suction, waterproof the wall and to serve as a bond between the wall and the paint. There has recently been developed an excellent size which is really a sealer and primer combined. It is composed of "kettle boiled" China wood oil, to which driers are added during the boiling process, and titanium dioxide, approximately 25 per cent. This makes a good size, for the reason that the China wood oil is more alkali resistant to alkali spots in the plaster than is linseed oil, and the excellent hiding qualities of the titanium dioxide makes practically the first coat. This product is also known as a pigmented primer. Another type of sizing is a first class high acid gum varnish—coach or spar—thinned with turpentine and to which is added enough of the paint mixed for the finishing coat to offset the brown color of the varnish. Varnish size should not be made from the cheaper suction or ceiling varnishes, nor from gloss oil or hard oil. These products are simply mixtures of rosin and benzine and usually are not satisfactory. Formerly a mixture of white lead and oil paint was used for sizing, but unless a long time can be given for it to harden, it is not satisfactory.

Paints

It is most important that the highest qualities of paint be obtained for the hospital. Not only for the reason that painted walls receive the punishment of repeated cleaning and scouring, but that too frequent shut-downs in the hospital for repainting be avoided. Prepared paints of known quality, already prepared, ready for use, are preferable to those mixed on the job. When use is made of one of the prepared wall paints, of which there are several excellent brands on the market, the best results will come only by meticulously following the direction about mixing and application, issued by the manufacturers.

The pigments used in wall paints today are chiefly Zinc Oxide, lithopone, and titanium dioxide. *White lead,* which is one of the oldest white pigments and has all the hiding power necessary, is used very little for interiors, although still extensively used on exteriors. It discolors because of the action of hydrogen sulphide and the sulphur compounds in the coloring matter used for tinting. It can be reinforced by zinc oxide against the attacks of gases and oil. Lead paint must be used by the painter with safeguards against lead poisoning. Time should be

allowed the painter to wash his hands before eating, so that lead will not accumulate on his finger nails.

Zinc Oxide is in common use, especially in combination with the other pigments, because it is unaffected by air or light, and does not change the qualities of any pigment with which it is mixed. Until the advent of titanium dioxide, it was used in most of the high grade enamel paints. It may be used for exterior work.

Lithopone (Zinc Sulphide and Barium Sulphate) is now extensively used. The earlier lithopones discolored because of impurities in the pigment, but since they have been eliminated, lithopone, especially for undercoats, is considered better than white lead, for the reason that it has more hiding power and is not affected by sulphur compounds. Lithopone has one disadvantage, in that the zinc sulphide, which gives it is hiding power, absorbs oxygen from the air with the formation of zinc sulphate. The zinc sulphate is soluble and washes away, thus spoiling the original finish, and prevents washing the walls. Lithopone cannot be used for exterior work.

Titanium Dioxide. This is the more recent of the common pigments in use today, and is coming more and more into use, especially in enamel. It is not affected by sulphur compounds, and for that reason it retains its color and does not form soluble salts, as does lithopone. In addition, it has greater hiding power than either white lead or lithopone, and may be used on exteriors. It is obtained from ilmenite, as the dioxide. It is very white, resistant to acid and alkali, and inert to all paint ingredients, varnish and lacquer.

Enamel

The better enamel paints are made of French process zinc oxide, with the highest quality of pure, raw linseed oil or vehicle, but are too expensive and slow drying and have poor hiding power. Enamel paints made with titanium dioxide are quite satisfactory. They have a high luster and almost as much hiding power as flat paint. A high gloss enamel surface can be repeatedly washed so as to maintain sanitary conditions, yet the gloss remains intact, and it usually is unnecessary to repaint for several years. In view of the principle that every surface in a hospital should be adapted to cleaning, the superior washability of enamel is a distinct advantage, and the economy effected more than offsets the cost of the enamel. The enamel finish is obtained almost entirely with the use of linseed oil, the percentage of oil directly determining the degree of the gloss finish. The higher the gloss, the more resistance to wear, bacteria, dirt and moisture. It is a general principle that the undercoats should be of the best grade obtainable, and that the surface should be absolutely clean before the work is started. A hard enamel surface may be obtained with a flat effect by "stippling" the last undercoat. The enamel coat is applied in the regular manner.

Flat White

The characteristics of flat wall paints are produced by using for the vehicle an oil varnish, which dries without luster, except for a slight sheen, seen when direct light reflects from it. Reducing the percentage of oil to pigment and increasing the proportion of volatile thinner, will produce the flat effect. The vehicle is usually a compound of China wood oil, treated linseed oil, or others with similar flatting ability. The pigments commonly used are lithophone or titanium dioxide. Such materials may be applied with less care than oil enamel. They flow freely from the brush, like varnish, and level up to eliminate brush marks, laps and joints, when the brushing is properly done. The spread is greater than enamel, and for that reason costs less per square yard. However, flat wall paints contain a high percentage of volatile thinners and set rather rapidly. If brushed excessively, they will roughup; and, if an attempt is made to rebrush areas which have been coated only a few minutes, it is likely that the film will be roughed-up.

These paints are rather porous, and although some of them can be successfully washed, they will not stand the repeated washings that high gloss enamel finish will. In addition, they easily show dirt and finger-marks. Flat wall paint serves very well as the undercoats for enamel finish, and is in common use for that purpose.

Color

No more perplexing problem than the subject of colors, elaboration, and extent of painted work confronts the hospital administrator. It is important to create a pleasant atmosphere, but the difficulty is in properly using paint to create the exact atmosphere desired. Paint alone cannot give the entire effect, but furnishings and general interior architecture must be considered in their relations to each other. For the general hospital, simplicity and comfort are essential, although elegance and spaciousness may be desirable in individual instances. The advice of a competent architect will often save time and prevent mistakes.

Patients are susceptible to color, ranging from a reaction of excitement to the red end of the spectrum to depression to the violet-blue and purple end of the spectrum. Experiments show a reaction of tranquillity to the range of colors from the light buff yellows to the lighter blues. These neutral colors also blend well with figured carpets and drapes.

It is economical to standardize on as few color shades as possible. Neutral shades of blue, gray, buff, and lighter greens are not only restful and soothing to the patient, but afford sufficient variety of color. A good color scheme, especially for corridors, is light buff for ceilings and the upper part of the wall. A dado line 1½" wide, placed about six feet from the floor, allows the lower part of the wall to be a slightly deeper shade than the upper part. This breaks the monotony, to the eye, of an otherwise plain wall, allows simplicity and gives economy in after care. The dado line is usually two shades darker than the lower color. For private rooms, the neutral colors just mentioned may be used. Buff (ranging from cream to ivory tan), or light green blend very well and have a light reflection index high enough in poor light, and yet do not give glare in bright light.

Reflective Values.—The following is a table of the coefficient of reflection for colored paints from the Institute of Industrial Research at Washington, D. C.:

Coefficient of Reflection

	Per Cent
Light Cream (U. S. Postal Color)	66
Light Pink	60
Light Yellow	58
Light Blue	55
Light Greenish Yellow	54
Light Green	42
Light Greenish Blue	36
Medium Blue	32
Medium Green	14
Red	12
Blue	12
Green	11

It is important to know that with different lighting arrangements, the figures given above, even though their relative values remain the same, their percentages change. In indirect light, yellow, light green and light gray gives almost the same per cent of reflection. In semi-direct light, yellow gives a better percentage than light green, light gray coming a close third. In direct light, yellow almost approaches the percentage of white. With natural illumination, the three colors have almost identical percentages, and are about 60 per cent as efficient as white, with magnesium oxide used as the standard, with a reflection of 98 per cent.

In the kitchen, a good grade of fume-resisting "mill white" enamel for sanitation, visibility and a saving of electric light expenses, seems advisable. The enamel finish is less porous, and, therefore, more resistant to steam vapors, grease, dirt, and germs. There is little danger of eye strain, for the reason that it is difficult to get sufficient light, especially in basement kitchens.

The paint industry has only recently adopted the scientific approach, and we may expect definite improvement to follow at any time. We have available reports issued by the American Society for Testing Materials, the Bureau of Standards, and others, but unfortunately these reports do not serve us effectively, because of the difficulty in translating them from technical language into practical terms. Too often, it is the salesman who is the only medium for dispensing new information, and he may be wrong or too enthusiastic. The chemists of reliable paint manufacturers can, and should, furnish us with definite information. They are the men who know the real value of the firm's development, and more nearly have the professional attitude toward teaching others.

Operating Room Lights

The principal desiderata in an operating room light are:

1. The delivery of the maximum candle power at the most obscure part of the operative field.
2. Constant color values.
3. Minimum heat radiation to surgeon's head, the operative field or the room in general.

1. The delivery of maximum light at the most obscure part of the operative field involves the elimination of shadows cast by the surgeon's hands or head or by those of his assistants, and adjustability of the light source itself so as to avoid interference between the light source and the deepest part of the operative field.

This is attained by broadening the base of the cone of light; by adjusting the axis of the light cone parallel with the axis of the depth of the wound and by adjusting the height of the light source in such a manner that the focal point (apex of the light cone) will fall at some point below the level of the zone to be lighted. Bringing the axis of the light cone parallel with the axis of the depth of the wound is the only way to prevent interference with the light and the casting of shadows by the more superficial parts of the operative wound, especially when the wound itself is of small diameter in proportion to its depth—in deep abdominal or pelvic fields for instance.

2. It is quite generally accepted by surgeons that constancy of color values is of more importance than the actual accuracy of color value and that no light is more inconstant than daylight; the trend of operating room design is to use artificial light exclusively without much attention to the color fidelity of the artificial light itself.

3. Heat on the back of the surgeon's head can become a real liability aside from its causing added perspiration and its hazards to the patient.

Proceedings of the Board of Trustees

Dec. 7, 1935

THE Board of Trustees of The American Hospital Association met in Chicago, December 7, 1935. The full membership of the Board was present as follows:

R. C. Buerki, M.D., president.
C. W. Munger, M.D., president-elect.
Asa S. Bacon, treasurer.
E. Muriel Anscombe.
N. W. Faxon, M.D.
Monsignor M. F. Griffin.
G. Harvey Agnew, M.D.
Walter E. List, M.D.
B. W. Black, M.D.

After the reading and approval of the minutes of the previous meetings held in St. Louis, the executive secretary announced the death of Mr. Daniel D. Test, a charter member and organizer of The American Hospital Association, a former president and for many years a member of the Board of Trustees.

The operating budget for The American Hospital Association and for the official publication, *Hospitals*, for 1936 was submitted as below:

OPERATING BUDGET APPROVED BY THE BOARD OF TRUSTEES, DECEMBER 7, 1935

For The American Hospital Association

Amortization—First mortgage bonds	$ 2,166.67	
Bond interest—First mortgage	1,482.00	
Bond interest—General mortgage	1,356.00	
Trustees—		
General expense	50.00	
Travel expense	2,500.00	
Administrative—		
Salaries	29,809.08	
Travel expense	1,500.00	
Supplies	1,250.00	
Telephone and Telegraph	800.00	
Exchange	200.00	
Postage and petty cash	3,000.00	
Publishing Transactions	4,000.00	
Miscellaneous	800.00	
Committees—General	1,500.00	
Convention Expense—		
General expense; technical exhibit	9,500.00	
Building expense	1,750.00	
Building repair	450.00	
Taxes	425.00	
Books and hospital literature	150.00	
Equipment—Building and office	300.00	
Membership Dues—		
American Standards Association	100.00	
Council Community Relations and Administrative Practice	2,000.00	
Joint Committee	1,000.00	
International Hospital Association	100.00	
Insurance—Premiums on fire insurance policies to be renewed	692.00	
Total for The American Hospital Association		$ 66,880.67

For *Hospitals*

The Journal of The American Hospital Association

Salaries	$14,030.00	
Printing magazine (12 issues)	16,000.00	
Mailing and postage	1,000.00	
Travel	1,000.00	
Telephone and telegraph	300.00	
Equipment and furniture	400.00	
Cuts and dies	300.00	
Office supplies and stationery	500.00	
	$33,530.00	
'To which should be added bills payable to the amount of $3,500—funds advanced by The American Hospital Assn.	3,500.00	
Total for *Hospitals*, the Journal of The American Hospital Association		37,030.00
Total operating budget for The American Hospital Association and *Hospitals* combined, as itemized		$103,910.67

It was

VOTED

That the operating budget as submitted for 1936 be approved.

VOTED

That the subscription price of *Hospitals* be $2.00 a year for personal and institutional members of the Association, the subscription price to be included in the annual dues, and that to others the subscription price be $3.00 per year.

VOTED

That an appropriation of $1,000.00 for 1936 for the use of the Joint Advisory Committee of the National hospital associations be made available for financing the immediate expenses of the Committee and that further arrangements for financing the Committee's activities be deferred until the meeting of the Board of Trustees in February.

After consideration of the facilities offered by the different cities that have extended invitations to the Association to hold its 1936 convention with them, it was

VOTED

That Cleveland be selected as the convention city in 1936 and that the dates for holding the convention be determined upon by the executive secretary and the convention authorities in Cleveland.

The following resolution was submitted for the consideration of the Board of Trustees:

"WHEREAS, The announced federal policy seems to exclude the use of funds for hospital service,

"THEREFORE, BE IT RESOLVED, That the Council recommend to the Trustees that The American Hospital Association urge all state and provincial associations and local hospital councils to focus their attention on securing state, provincial, or local tax funds to supplement the financing of service to indigents.

"SECOND, BE IT RESOLVED, That the Joint Committee be instructed that the sentiment of the Board is not in favor of the presentation of new legislation to Congress providing for a new appropriation of federal funds to voluntary hospitals for the care of the indigent sick."

After discussion it was

VOTED

That the resolution be approved by the Board of Trustees and that the executive secretary be instructed to make it available to the Joint Advisory Committee.

The following resolution was presented for the consideration of the Board of Trustees by the Council on Community Relations and Administrative Practice:

WHEREAS, The five hundred general hospitals operated by city, county, and state governments are frequently overcrowded, and often find it difficult to secure sufficient funds to maintain the high standards of care which their patients require and which their medical staffs and administrators wish to render, and

WHEREAS, The voluntary hospitals established for community service and these governmental hospitals have a joint interest, in common with that of the general public in seeing that needed hospital care is available upon a high professional standard to the sick poor in every community, and

WHEREAS, There is a large number of governmental hospitals that, because of legal restriction, are at present not members of The American Hospital Association.

THEREFORE, BE IT RESOLVED, That the Council recommend to the Trustees that united action by governmental and voluntary general hospitals through local hospital councils and through state and national hospital associations should be directed toward the maintenance of high standards of care and administration in the governmental general hospitals and toward securing adequate appropriations from tax funds for their upkeep, and

THEREFORE, BE IT RESOLVED, That the Council recommend to the Trustees that special study be made of this situation to arrive at an arrangement whereby this increasing number of excellent institutions be brought to participate in the benefits of membership and to add their weight to the action of the Association.

After discussion it was

VOTED

That the Board approve the resolution and that The American Hospital Association take the indicated action.

The reports of the various study committees of the Council were submitted to the Board for approval. It was

VOTED

That Dr. Joseph C. Doane's study on "Licensing, Incorporation, and Tax Exemption of Hospitals," that Dr. C. Rufus Rorem's revised handbook on group hospitalization, that the Council's Study on Maternity Care in Hospitals, and that the Qualifications for Technicians, be approved and that they be published and distributed when and as the Association funds for this purpose were available.

It was

VOTED

That the executive secretary be instructed to send out a letter drafted by Dr. R. C. Buerki to all institutional members of the Association accompanied with the pamphlet prepared by the Advisory Board on Medical Specialties.

It was the sense of the Board of Trustees that the new journal of the Association, *Hospitals*, be used as much as possible in publishing reports and studies prepared by the Council and other Committees of the Association.

The following resolution pertaining thereto was voted:

"MOVED, That the reports and studies of the Council and of all other Committees of the Association be passed on by the Board of Trustees for approval, and, when approved, be made available to the editors of *Hospitals* before publication or the employment of any other means of circulation. This in accordance with the precedence already established by the Board of Trustees in connection with reports of Committees of the Association and of manuscripts and discussions of papers presented at the Annual Convention of the Association."

The executive committee of the Hospital Exhibitors' Association called on the Board of Trustees and submitted a list of proposals asking for the cooperation of The American Hospital Association in the work of the Hospital Exhibitors' Association in promoting matters of mutual interest to the two associations.

It was

VOTED

That the Board of Trustees approve in principle the proposals submitted by the executive committee of the Hospital Exhibitors' Association and that the President appoint two members of the Association to serve as consultant members to the executive

committee of the Hospital Exhibitors' Association.

The report of the delegate of The American Hospital Association to the International Hospital Congress, Rev. Alphonse M. Schwitalla, S.J., was submitted together with the resolution adopted by a group interested in international hospital relations which held a meeting in St. Louis. It was

VOTED

That the President appoint two members consisting of the senior officer of the International Hospital Association residing in the United States and the President of the Association to act as a committee on International Hospital Relations.

The following resolution was voted by the Board of Trustees:

"RESOLVED, That the Executive Secretary is the administrative officer of the Board of Trustees of The American Hospital Association. As such he is responsible to the Board, carrying out the actions of the Board, and directing the details of the administration of the affairs of The American Hospital Association.

"The Assistant Secretary is understood by the Board of Trustees to be an assistant to the Executive Secretary, and as such to carry out the instructions of the Executive Secretary and to be responsible directly to him."

It was the sense of the Board of Trustees that the next meeting of the Board should be held in February, 1936, during the week of the meeting of the Council on Medical Education and Hospitals of the American Medical Association.

There being no further business to come before the Association the Board adjourned to meet at the call of the President.

Purchase or Manufacture Electric Current?

T. K. GRUBER, M.D.

Medical and General Superintendent, Eloise Hospital and Infirmary, Eloise, Mich.

ONE NEED NOT be a graduate in engineering from an engineering school, nor need not be a stationary or portable operating engineer to easily determine fairly well the efficiency of a power plant when, or where, the point is arrived at that it pays to buy electricity from an outside producer, rather than produce it with institutional generators. The foregoing statement is predicated on the supposition that the power plant is already installed, with sufficient electric generating capacity to supply the institution.

Provided a brand new institution is to be built or changes in the power plant are contemplated, don't for any sake presume that an administrator can tell offhand whether the expenditure of money for generator capacity, and the operation of same, can be carried out economically. By all means, employ a firm of power plant and heating engineers to give an opinion, resting assured the money spent will be the wisest investment ever made, regardless of the cost.

The writer arranged to employ such service just to analyze the power plant of the institution, the engineer's fee being three thousand ($3,000.00) dollars. Recommended changes cost thirty-six hundred ($3600.00) dollars. Resulting saving retired the cost in one year; the soap bill in the laundry, for instance, dropping two hundred ($200.00) per month.

Allow the insertion here of certain elementary facts that can be gleaned from most any text-book on steam or electric generators:

1. B.T.U., or British Thermal Unit, is the unit of heat that will raise 1 pound of water 1 degree in temperature.
   2,547 B.t.u. equal 1 horsepower.
   14,000 B.t.u. equal 28,000,000 B.t.u. per ton of coal.
   3,412 B.t.u. equal 1 kilowatt hour.

One pound of water after being evaporated is spoken of as one pound of steam. This is a unit of measure and not a reference to pressure.

One pound of coal of 14,000 B.t.u. should in a 75% to 85% efficient plant evaporate 10 to 11.5 pounds of water.

Higher boiler efficiency has come about in the past ten years in the increased efficiency in the handling of produced steam.

Power plant ratings show that the best power plants seldom exceed 85%; however, a plant that falls below 65% is a disgrace. In other words, the efficiency of a plant depends on the amount of heat

that is absorbed on the combustion of coal, by the boiler water, thus transforming this boiler water into steam; depends on what use is made of the steam after production.

With the few simple equations given above, anyone with half an eye can do a bit of gauge reading or get someone to send in a report each day to the office from the power plant, and by some very simple arithmetic determine once in a while just what is happening.

Here will not be discussed such matters as fusion point; ash resultant of combustion; volatile matter; moisture, etc., of coal. While these items and many others are important; in buying and storage of coal, each plant, depending on location, construction, and demand, is an individual problem in itself and should and can be carefully and profitably studied by each individual administrator; however, in this short thesis they are not essentially pertinent.

The individual administrator can apply one simple test to the power plant. Watch the smoke-stack for a few hours and if large to even moderate amounts of colorful black smoke are emitting the plant is wasting combustible fuel, billowing it out the chimney to make more expense by depositing soot over the grounds and buildings to be cleaned up.

In plants operating turbine generators or reciprocating engine generators, again a very simple test can be applied to determine when and if there is an economy in producing or buying electric current. Watch or listen to the pop-off valve or safety valve from the boiler or escape end of the turbine or engine. If billowing clouds of hissing roaring steam are emitting, pounds of coal, now transformed into steam, instead of being wasted out the chimney, are exhausting to the atmosphere as steam.

Just as long as the exhaust steam from the engine or turbine for the generator can be completely used up in heating buildings, water, or make up water for boiler feed, the institution can save money on producing electric current, it being assumed, of course, that the steam passing through the engine or turbine is "bled off" and used.

Whenever the point is reached that exhaust steam from producing electric current exceeds the demand for low pressure steam, the institution can save money by buying electric current from the local utility company.

Above has been stated that coal combusted under a boiler gives off heat to the boiler, and this heat absorbed by the water in the boiler changes water to steam at proper temperature. Get this next point well fixed in mind. The great cost is in actually raising water to steam temperature. The so-called super-heated steam, or high-pressure steam is arrived at very cheaply, once steam actually exists, the costs increasing in a reverse geometric ratio.

For heating buildings and hot water very low pressure steam is required; however, as stated, the cost is in producing steam. After steam is once produced the institution should look to some method of, as the stock market gambler says, "averaging down" the cost or "averaging up" the things accomplished with the steam, thereby getting the most possible advantage out of the coal burned.

The power plant does not need to be very large, nor the electric demand very high, to show an economy in operation by installing turbo-generators, building up a five to ten pound back pressure on the exhaust side and using this to heat the buildings, water, and make up water for boilers. The electricity or the heat, one or the other, immediately becomes a "by-product" and this can be proven by actual operation in any plant.

Don't get the idea that this is an open and shut proposition; that "presto-chango" money is saved. The economic operation of any plant depends on first getting a real competent heating engineering firm to analyze the needs and possibilities. By engineering firm is meant just what is said, and not a self-starter jack-of-all-trades architect, engineer, or what-not. Good engineering concerns are few and far between.

During the summer months, when no heating load is required, in all probability part of, or all, the electric current can be more cheaply supplied from the local "Public Utility," but during the heating season, most emphatically, electric current can be more cheaply produced in the institution plant. Just as long as the steam engine or turbine is operating with no steam going out of the pop-off valve, electric current is a "by-product," but as soon as billowy steam is seen or hissing steam heard precious coal is being burned for naught. Plan on as near a perfect balance between produced electricity and purchased electricity; in other words, so that the steam sent out from the boiler can be condensed, collected in return lines, and fed back into the boiler as hot water, remembering again the first part of the heating of water into steam is the expensive heating.

To sum up: It costs money to buy coal. Don't allow the coal to be partially burned, the remainder going out the chimney as smoke. If possible, conserve the steam produced and make it do more than one job, as far as economically sound; viz., produce electric current, heat the institution; heat water; heat make up water for boiler; remembering that a balance can be reached on production and purchase.

Watch the smoke-stack; watch the exhaust funnel, or listen to its "blow-off."

Air Conditioning in Hospitals

Report of the Committee on Air Conditioning

C. W. MUNGER, M.D., Chairman
Superintendent, Grasslands Hospital, Valhalla, N. Y.

THE POSSIBILITIES FOR HOSPITALS in the use of air conditioning were rather thoroughly discussed in the 1934 report of this committee.[1] That report also described various types of apparatus. It sounded a warning to hospitals in two respects; viz., (1) Air conditioning of entire buildings is prohibitively expensive for hospitals, and (2) no ideal system has yet been devised and, because further developments and changes are to be expected, investments in apparatus should be cautious.

Membership of this year's committee has included two hospital architects, a hospital consultant and two medical directors of hospitals, one in the south and one in the north. They have all contributed to the present report. While there has been some notable development, it is still our belief that the ultimate in hospital air conditioning has not yet been reached, and that the boons of air conditioning are still too costly for unlimited use in our institutions.

While, a year ago, air conditioning was mainly a matter of interest or uncompleted plans, as far as hospitals were concerned, we can now report that several institutions have, or are making limited installations. Your committee has corresponded with numerous persons who have had questions to ask or suggestions to make. While interest in the subject seems country-wide, there is evidence of especial interest by hospital in southerly latitudes. From all directions, inquiries have come as to the use of air conditioning for asthma, hay fever and related allergic conditions. Likewise, the interest is general as it relates to operating suites and nurseries for the newborn.

Theaters were the first extensive users of air conditioning. Apparently more and more of them are finding these systems justified in box-office receipts. Restaurants have followed suit and there is evidence not only of increased numbers of diners, but it is claimed that appetites are whetted and physical comfort sustained to the extent that patrons order more freely and expensively. The planners of recent office buildings have, apparently, considered it a good investment to make air conditioning available to tenants. Commercial firms, such as department stores and hotels, have installed it, some of them very extensively. An insurance company operating its own large office building is reported to have found air conditioning a good investment. In most hospitals, unfortunately, there seems no early possibility of financing large installations through increased income. While private patients who can spend lavishly are no longer numerous, there seems little doubt but that limited numbers of individual room units, if made available, would support themselves or possibly pay a profit.

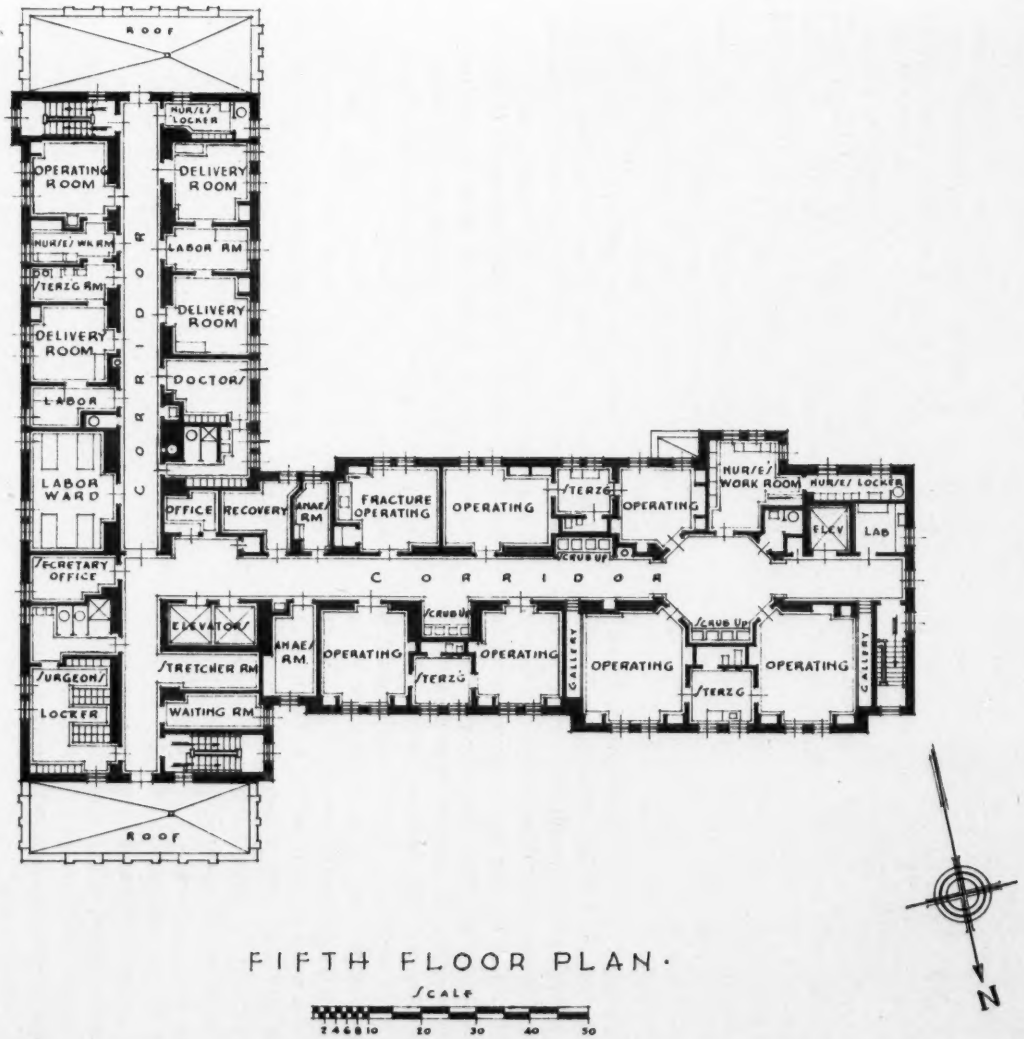
In the Rockefeller Center Project, in New York City, the engineers have designed a system known as "Selective Cooling," which they believe adaptable to office buildings and hotels and which may, possibly, have some limited application in the hospital field. By this system, piping is installed with the building construction which provides a refrigerant means at every point in the building where it is possible to install a plumbing lavatory. Machinery in the basement makes possible the circulation, through these pipes, of a constant flow of water. The office tenant who wants air conditioning may have a suitable unit installed with connections to the water supply and to the drain which serves the lavatory.

A hospital[2] well known to every one of us is completing an air conditioning plan for operating suite, delivery suite and newborn nurseries, a total of 14 rooms. This plan resembles, on a small scale, that described in the preceding paragraph, in that it will use circulated water as its source of refrigeration.

The plan has been adapted as carefully as possible to the conditions existing in the particular institutions. In brief, the refrigerated water is circulated in suitable insulated pipes to each operating room, delivery room and nursery. Each one of these rooms utilizes the refrigerated water as a part of an air conditioning unit, which is so devised that it is expected to maintain a relative humidity of 55 per cent, to heat or cool the room according to requirements, to filter the air, to operate automatically unless especial conditions are required, in which case the unit may be adjusted to these conditions, to supply as much fresh air as desired, as well as to

[1]Proceedings A. H. A., 1934, pages 306-314.

[2]Worcester City Hospital, Worcester, Mass. Dr. Geo. A. MacIver, Supt.

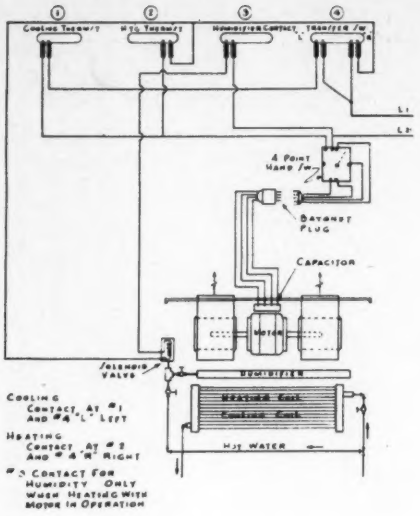


FIFTH FLOOR PLAN.

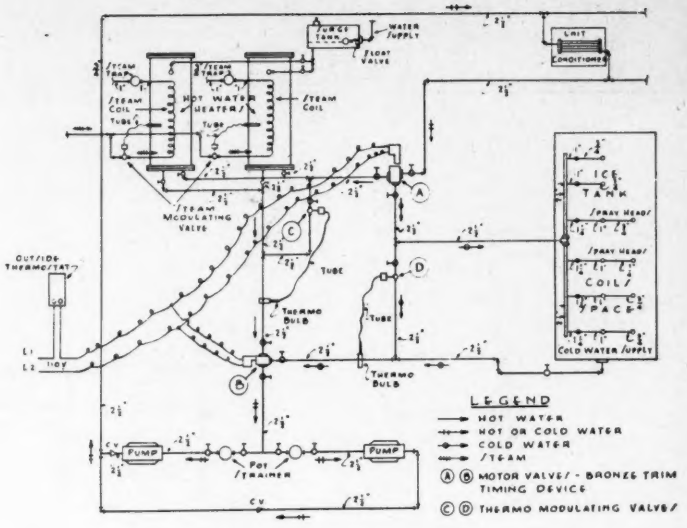
SCALE

2 4 6 8 10 20 30 40 50

WARD AND SURGICAL BUILDING	WORCESTER CITY HOSPITAL	STEVENS CURTIN & MASON ARCHITECTS BOSTON, MASS.



WIRING DIAGRAM
UNIT CONDITIONER
FIGURE II



HOT & COLD WATER SUPPLY SYSTEM
FOR AIR CONDITIONING UNITS
FIGURE III

recirculate the air. The air conditioner is operated in unison with an exhaust fan. The system installed makes it possible to change automatically from the circulation of refrigerated water to the circulation of heated water, a thermostat being placed outside of the building to control this. Both the cold and hot water are circulated through the same apparatus, a copper-fin radiator. These radiators are oversize as compared with radiators used for heating only, so as to give sufficient radiation surface for proper cooling. The system is arranged to give proper cooling with a temperature of 45° F. (8° C.) for the cold water and to heat the room with hot water at 160° F. (72° C.). A warm water spray is provided for humidification, this spray functioning only when the heating cycle is in operation. A ventilating wall box fitted with insect screens and dampers provides an intake for outside air and a space is provided for a filter element which can be discarded after using. The unit is connected to a drain line to carry away the condensate from the cooling coil as well as water from the humidifier sprays.

In the particular hospital there was already a 15 ton ammonia refrigerating compressor and only about 30% of the capacity of the machine was needed for refrigeration and ice making. The planners, accordingly, decided to connect this compressor to a tank to produce cold water for the air conditioning system. The maximum connected load of all the air conditioning units was considerably in excess of the 10 tons of refrigeration available. The number of days during the season which would require the maximum of cooling was calculated. It was determined that in only 20 days of the year would the weather be hot enough to over-tax the ten ton capacity. It was not considered advisable to install additional refrigerating units which would be able all but 20 days of the year, and the problem was met by installing a larger cold water tank with ammonia coils in one-half of it and a space in the other half for dumping ice to splice out the load on days when maximum cooling is required. The planners estimate that it will be sufficient to use a ton of ice on each of the 20 hottest days. This combination of ice and mechanical means for producing cold water is economical inasmuch as it allows the selection of a machine for the normal load and provides an inexpensive means of meeting peak conditions which are relatively few. The plan is recommended for the consideration of others. The detail of this installation is well illustrated by the diagram reproduced herewith.

The committee also calls attention to several installations, of which it has heard, in which the cooling system is operated without the use of refrigerating machinery, through the fact that it was possible to utilize mountain streams, deep wells, or other sources providing water already unusually cold.

While the committee reiterates its belief that the ultimate development is yet to be reached in air conditioning systems for hospitals, it feels justified in calling attention to the above-described "Worcester" plan as one of the most practical which it has studied. A report of the mechanical functioning and of the operating costs of this installation will be of real interest, one year hence.

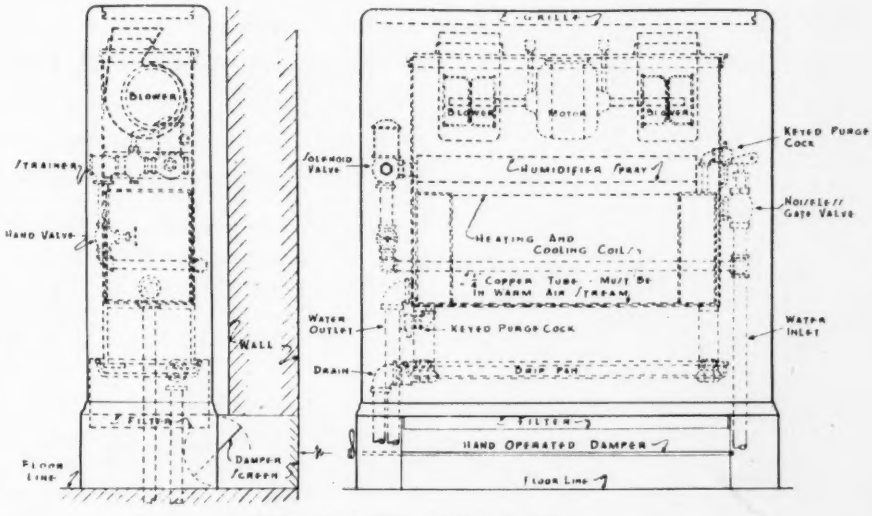
Our 1934 report mentioned the desirability, for hospitals, of the development of a truly portable,

effective room unit for air conditioning. We have believed the portable units, which require periodic filling with ice, to be rather impractical. We had hoped that a suitable unit might be developed through the use of a solidified carbon dioxide (dry ice) but the one company known to us, which was developing such a unit seems to have ceased operations. We have, lately, heard of several room cooling units, designed for summer use only. One of these utilizes hermetically sealed refrigerating units and a system of fans to provide air cooling, filtration, dehumidification and circulation of the air, without need of plumbing connections. A separate set of fans draws in outside air to cool condensers and evaporate contents of drip pan, discharging to outside air. The unit weighs 600 pounds and costs almost as many dollars. It is made by a well known concern and might in its present state be of definite interest to hospitals, in warm climates where the problem of heating and humidification of air in winter is not important. In northern climates it might be useful in summer for cooling and dehumidification. We are not convinced that units such as this, which merely filter and do not wash the air, are entirely satisfactory for treatment of allergic conditions requiring removal of pollens, etc., from the air.

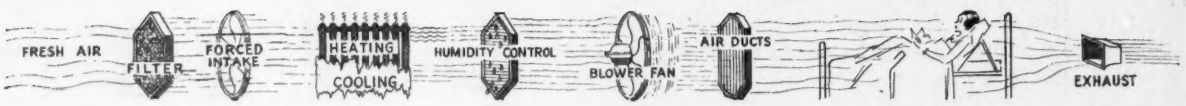
The addition of moisture to the superheated winter air is important in the sick room, as is well known, and it is doubtless of value in prevention of common colds. Added moisture in the operating suite is even more imperative because it reduces the hazard of explosion of anaesthetic gases, said to be impossible of occurrence in a relative humidity of 55% or more. The committee has had several inquiries during the past year as to the dangers of explosion in connection with air conditioning systems for operating rooms. Our correspondents were particularly apprehensive lest, through recirculation of air, the operating room's atmosphere would become supercharged with anaesthetic gases. This seems a remote possibility, as will be explained, but the committee believes in erring on the side of caution and would advise against any extensive recirculation of the air of operating rooms. For the present it is believed a mixture of two-thirds fresh air with one-third recirculated air to be within limits of safety. An exhaustive article upon the dangers of ethylene,[3] the most explosive anaesthetic gas used, indicates that the only area of explosive concentration of that gas is within 10 or 12 inches of the anaesthetic mask. This article, rightly, stresses the importance of thorough grounding of the anaesthetic apparatus and other equipment. The modern operating room should have no source of open flame, and electrical sparks must be eliminated by the use of no-spark switches and other connections whether or not air conditioning be used. On the other hand, proper air conditioning corrects the most important predisposing cause of explosions, viz., dryness of the atmosphere. If we are to believe the above-mentioned article,[3] explosion from static sparks is virtually impossible if there be sufficient humidity.

The committee believes that, for operating rooms, air conditioning systems should be designed to maintain a relative humidity of 55 and a temperature of 80° F. If outside temperatures are extremely high (95° F. or more) the temperature of the operating room should probably be maintained at more than 80° F., otherwise the sharp drop in temperature

[3]Bishop, Howard E., "Eliminating the Dangers of Ethylene," Modern Hospital Magazine, August, 1932.



AIR CONDITIONING UNIT
FIGURE I



between ward and operating room would be dangerous for the patient, not to mention the staff.

We beg to repeat the committee's former recommendation of thorough insulation of the walls, ceiling and floors of rooms to be air conditioned. Operating rooms are nowadays sometimes built without windows, but all of the older ones have extensive windows or even sky lights with resultant rapid radiation through the glass. Special glass with two, three or more thicknesses of glass with air space between is now available and its use is recommended. Insulation is necessary, not only to prevent loss of heat or cold but also to prevent condensation of water vapor on walls and windows. Without insulation, humidification may be difficult or impossible.

A member of this committee says, in essence, that hospital authorities should constantly realize that air conditioning for comfort and air conditioning for therapy have different requirements. Comfort air conditioning in the portions of the building used by well folk, is not difficult to obtain but none of these plans are necessarily satisfactory for ward, private room, operating suite or nursery. An atmosphere conditioned for operating rooms may not be the best for the asthma ward and vice versa. We should be able to get any climate desired by the patient's physician regardless of changes in outside conditions, and, to attempt to "serve" air conditioning to patients without such control might easily do more harm than good. Executives should proceed with caution in air conditioning rooms and wards, because the completely controllable and entirely satisfactory system for this purpose is apparently yet to be devised.

It should be borne in mind that every air conditioning problem is an engineering problem requiring individual study to fit the conditions imposed in each case.

Another member may be quoted as follows:

"I have used air conditioning in the care of asthmatic and allergic patients. Some of the results obtained were phenomenal and have convinced me that we should install air conditioning in units to which such patients can be confined. Some of the hospitals in this part of the country (the south) have installed air conditioning in nurseries for newborn infants with very satisfactory results. Infants are freed of summer diarrhea and prickly heat, they sleep much better and gain weight more rapidly. As to operating rooms, I should like to have some authoritative report upon the patient's reaction to it, especially if the temperature is lowered very much. I should also like to see actual data to support the claim that air conditioning of the operating room prevents exhaustion of patients. I believe this committee should devote its attention to air conditioning of individual units of the hospital rather than to treatment of entire buildings because very few hospitals at the present time would be financially able to consider more than fractional installations."

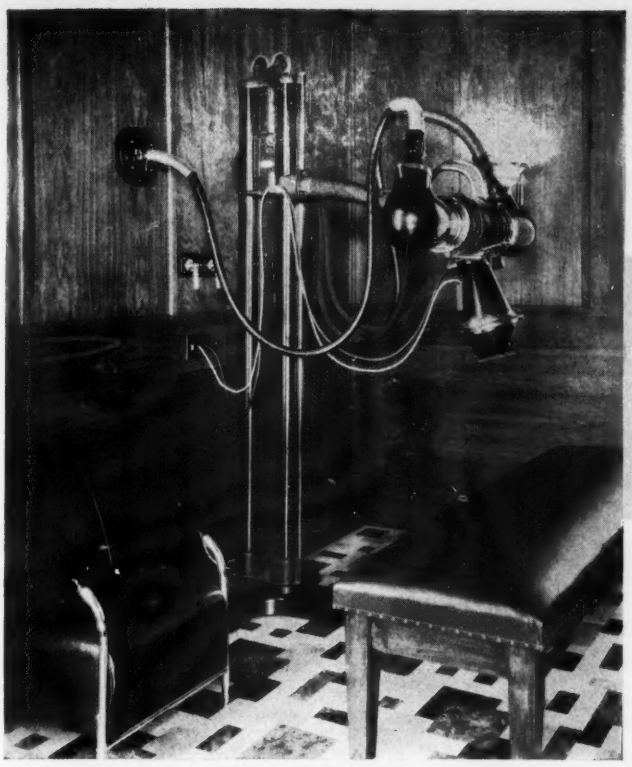
With apologies to the Pullman Company, the committee reproduces a diagram which will serve to clarify, to the uninitiated, the various steps in air conditioning.

Your committee regrets that its members are all busy persons and time for study of this interesting subject has necessarily been limited. We believe we have made no major errors or omissions but will welcome advice and comment for the benefit of our successors, if this committee is continued. In view of the rapid changes which are occurring in this new and interesting science, we recommend that the Association continue to study it for at least another year.

Minnesota Hospital Association

The Minnesota Hospital Association has been successful in having the rate set by the State Compensation Rating Bureau, covering the value of perquisites upon which they must pay premiums for compensation insurance in addition to payrolls, from $52.00 a month to approximately $39. The basis established is $1.00 a day for board, and $2.00 a week for lodging. The premium rate for professional employees has also been reduced from 38c to 27c per $100 of payroll.

The Legislative Committee of the State Association is planning to prepare and submit a bill covering the licensing of all hospitals in the State. Also another bill similar to that of Ohio covering reimbursement to hospitals for the care of indigent patients who are injured in automobile accidents.



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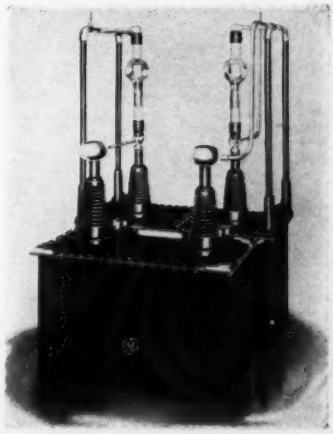

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Among the Associations

State and Province Association News

Colorado Hospital Association
Address of the President

JOHN ANDREW, M.D., F.A.C.S.

Longmont Hospital Association, Longmont, Colo.

Since the establishment of the first hospital in the fourth century of the Christian era, it has been an increasing blessing, not only to the indigent, the mentally afflicted, the aged, but to vast numbers who have found that injury and illness can be better treated where equipment, training and supervision can be administered.

The vicissitudes of time are constantly increasing the burden and demanding greater resources for operation. *Education* to *enlighten* the *public and understanding with the government* are two essential problems to be sponsored, that more of the afflicted may receive the best care possible.

Those engaged in the art of relieving the sick and injured are engulfed in the mesh of propagandists' slogans, that would socialize all professions that are engaged in this work. May we hope and pray that this shall never come to pass.

Many decry the practice of complacency in traditional, well-managed and proven methods in the social order. They sponsor "new schemes," "new deals," and "new adventures" that appeal to the gullible and force society to suffer their mistakes and pay the costs. Paternalism, Regimentation vs. Individualism, is the Utopia of those who fear the future. The heritage of the thrifty is threatened, boycotted and bewildered; they are unable to foresee any hope or whither they are going. Fortunately, many schemes are fly-by-night events, but their shadows may linger indefinitely. Progress cannot be stopped, it will only be hampered. True science, based upon facts, will continue to develop and add to the alleviation of the ills of self-supported society.

If private and voluntary hospitals are to function properly and with high standards, it is very obvious, no matter how much they may dislike political proselyting, they must safeguard their rights, and insist that they be relieved of burdens that are society's charge.

National Legislation

Hundreds of bills were introduced in the legislatures of the several States and in the Congress of the United States. We were informed constantly of these presentations and their results by The American Hospital Association. This service is invaluable and I trust that it may continue for time to come.

The Joint Committee of the National Hospital Associations did excellent work at Washington, in getting amendments to certain bills, exempting hospitals, that would have added greatly to the operating budget of the hospital.

The attitude of those who introduced bills for the purpose of raising revenue, was decidedly discriminatory and was unfair to our organization. Federal funds were being constantly thrown to an untold number of industries, schemes and relief, yet the hospital, one of the greatest aids to national welfare, was ignored and even handicapped by adding additional taxes to an already overburdened, struggling, necessary part of the communities of the Nation.

In spite of the additional handicap of the depression, or a "period of confusional insanity afflicting everything and everybody," and the inability of patients to meet their bills, only approximately five hundred of the six thousand hospitals in the Nation have been compelled to close since 1930. All of those remaining may not be solvent, yet their spirit has not been defeated.

State Legislation

This being the legislative year of our State government, it was necessary for us to devote close attention and added effort to have legislation enacted, by our legislature, that would in part protect and relieve the institutions of this organization.

The Committee on Legislation had drafts of two bills drawn, which they succeeded in having enacted and to become laws, viz.: The "Impostors Law," applying to hospitals and sanitaria, and "The Automobile Financial Responsibility Law."

The Committee was ably assisted by Senator Lee Knous; our own honorary member, Geo. Collins, and members of other allied professions.

To each of these we extend our sincere thanks and appreciation.

We gave our support to the passing of "The Hypnotic Drug Law," and to the "Narcotic Law," both becoming laws and now in force.

In addition to the above, I believe that we had a part in preventing many bills from becoming laws that would be detrimental to the scientific control of health.

Additional legislation is needed in our state and

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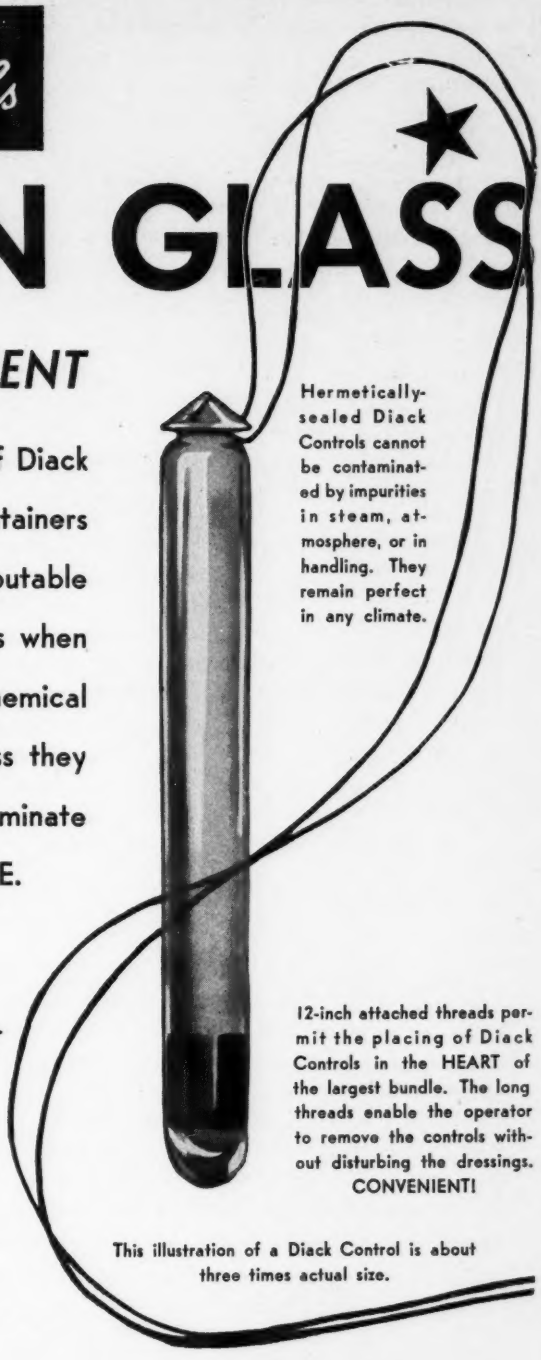
Why sealed in glass? The chemical tablets of Diack Controls would function without their glass containers and could be made at less cost. But no reputable hospital will knowingly tolerate half measures when a patient's life is at stake. Because the chemical tablets of Diack Controls are sealed in glass they cannot be contaminated and cannot contaminate your dressings. Diack Controls are SAFE.



Hermetically-sealed Diack Controls cannot be contaminated by impurities in steam, atmosphere, or in handling. They remain perfect in any climate.

12-inch attached threads permit the placing of Diack Controls in the HEART of the largest bundle. The long threads enable the operator to remove the controls without disturbing the dressings. CONVENIENT!

This illustration of a Diack Control is about three times actual size.

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When you see ice melting you know it is being subjected to a temperature of 32° (and that it takes time to melt!). When you see the chemical tablet in a Diack Control melted, you know a temperature of 248° has reached it for a period of 10 minutes—and that COMPLETE STERILIZATION has permeated the autoclave load. No guesswork with the melting point of Diack Controls—they are CERTAIN.

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Packed in shock-proof boxes; 100 to each box. 1 box, $3.60; 5 boxes, $3.40 each; 10 boxes, $3.20 each; 50 boxes, $3.00 each. Shipped postpaid anywhere in the United States and Canada. (Samples free.)

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I believe that it can be as successfully obtained as was gained this year. Keep in mind this problem and give every aid possible to those who are appointed to map the course.

There is need for legislation within our organization. It is very probable that, in a short time, there will be a change in the method of holding membership in The American Hospital Association. If adopted, our constitution will have to be amended, and if not, some arrangement should be made for institutional membership in our State Association.

Membership

An effort has been made to increase the membership of the Association this year.

There have been some losses, yet I believe that the newly-acquired members give us a net gain.

There are seventy-six hospitals reported in the American Medical Association Journal in this State, of which only forty are represented in our membership.

The effort should be continued, for I am sure that we need their help as well as they need ours.

The Council on Medical Education and Hospitals of the American Medical Association is anxious to cooperate in every way for the improvement of hospital service, whereby the sick and injured may be provided with scientific and ethical medical care. It claims no legal authority over any hospital and acknowledges that those in charge of institutions have the unquestioned right to conduct them as they desire.

To obtain recognition of the Council, certain basic requirements are set forth.

The qualifications required are organization, staff, competent nursing staff, records, pharmacy or drugs adequately supervised, autopsies, then possible radiology and conformity to medical ethics. It is only a matter of time until our State Board of Health will demand these requirements to receive a license to operate a hospital or nursing home.

The interest the American Medical Association and the American College of Surgeons have taken in demanding higher standards in hospitals has greatly benefited many institutions, and assures the patients, who patronize them, adequate medical and surgical care, in an ethical manner.

This demand has, in the vernacular of the street, "cleaned house" in many instances—the benefits are untold.

Now that a hospital must show proof of its ability to serve ethically and scientifically, why is it that members of the above associations continue to patronize, to establish and operate institutions that are anything but adequate or ethical? Collaboration, consultations with anyone, no matter who or what his ability may be, is practiced by these members.

It is time that the hospitals demand that The American Hospital Association and The American College of Surgeons interest themselves in this matter, and demand that their members be ethical and professional and support the institution that has met their specified qualifications.

Conclusion

The future of our hospitals is not one of great apprehension, but one of greater hope that they may contribute greater aid to humanity. "The unyielding thorn is ever present to give warning by its pointed tip, of the dangers that lie on the threshold of our future course."

"Undaunted perseverance is the only means of reaching a goal."

Governmental competition must be obviated and *adequate accommodations* should be furnished that are within the means of the masses.

I believe that if these two things could be accomplished, the deficits and worries of many voluntary hospitals would be obviated, the burden of governmental institutions would be lessened, added service would be given to society, and many of the problems would be solved. Therefore, all institutions, no matter how large or how small, "that emulate the ennobling ideals of service to stricken humanity, will ever stand in all their beauty."

Florida and Georgia

The Florida and Georgia Hospital Associations held their annual conventions jointly at Jacksonville, Florida, on November 29 and 30. Mary Corbitt, of the James M. Jackson Memorial Hospital, Miami, assumed the presidency of the Florida Hospital Association, Fred M. Walker, of the Duval County Hospital, Jacksonville, continuing as executive secretary. W. D. Barker of Georgia Baptist Hospital, Atlanta, was re-elected as president, and Dr. Charles W. Curry, of Candler Hospital, Savannah, was elected secretary and treasurer of the Georgia Hospital Association. The program consisted of discussions of Group Hospitalization, Workmen's Compensation, Standardization of Small Hospitals, Nursing Service, Hospital News, and the Relationship of Hospitals to the Public and Medical Profession. Dr. Bert W. Caldwell, executive secretary, represented The American Hospital Association, and Mr. Robert E. Neff the American College of Hospital Administrators at the meeting.

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Square pegs in round holes or round pegs in square holes—that's absurd. But there are square holes for square pegs and there are round holes for round pegs, and finding them is our day-long job.

—In a Job You Love

If the job that's yours today doesn't fill you with pride, if it doesn't make you oblivious to all other things while you are working on it, you are trudging in a rut and it isn't fair to you nor to those who pay your wage and keep.

You're a round peg or a square peg in a square hole or a round hole, and there isn't peace of mind in a job like that.

There are other men or other women who would find contentment in the job you hold; and there are jobs where you would fit, where you'd do wonderful work, where you'd progress as you know you can progress.

That is our task, to provide hospitals with competent, earnest dependable personnel —and to find positions for men and women, jobs that they can love.

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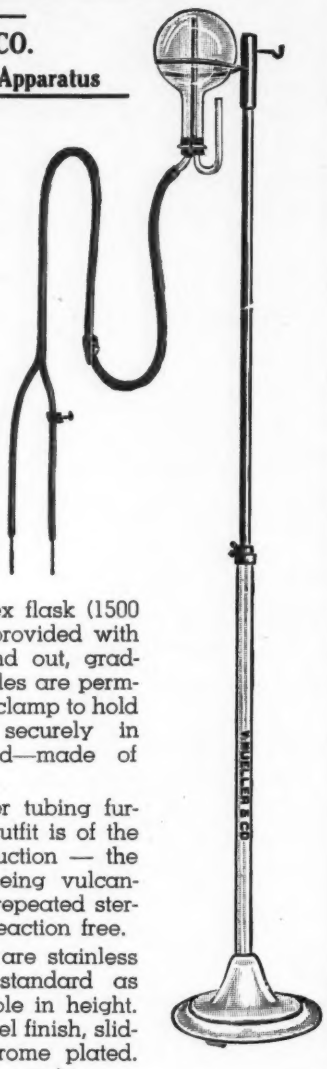

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Arkansas

The Arkansas Hospital Association held its mid-year meeting at Hot Springs National Park on November 15. Topics under discussion were Compensation Cases, Government Aid, State Public Welfare, General Hospital Legislation, First Aid Care, and Hospital Publicity in the Press.

New York

Carl P. Wright, Secretary of the Hospital Association of New York State, was elected President of the City Council in Syracuse at the November elections.

The Medical Practice Act of New York State has the following stipulation: "Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services." A committee of the Industrial Council of the State has ruled that anesthesia, X-ray, physical therapy, and pathological services come under "medical and surgical services" in the meaning of the law, and that accordingly bills for these services must be rendered by physicians.

The New York State Hospital Association is requesting permission for hospitals to render bills for such services with the hospital bills, as the agent of the specialist rendering these services in the hospital. In the meantime, however, they are advising the hospitals of New York to comply with this order.

Oklahoma

The Oklahoma State Hospital Association held its annual meeting at Enid on November 20 and 21. Mrs. D. I. B. McNulty, of the Morningside Hospital, Tulsa, was elected president, and C. B. Hanna, of the Chickasha Hospital, Chickasha, secretary and treasurer.

Alabama

The Alabama Hospital Association has accomplished a noteworthy piece of legislation in having its Trustees, and the Board of Censors of the State Medical Association, approve all hospitals before they can adopt any periodic payment plan for hospitalization. The two boards also act as an advisory committee to the Superintendent of Insurance in the formulation of all regulations covering group hospitalization.

OHIO

The State Medical Board of Ohio has agreed to submit all regulations regarding schools of nursing to the Ohio Hospital Association before taking action upon them. It should be the objective of all state and provincial associations to have their membership represented on all general or advisory state committees consisting of members of the

public, so that these committees may receive a full appreciation of the relationship and effect upon hospitals of any matters under consideration relating to hospitals. Hospital associations have been content for too long to permit public officials to appoint a member of the medical group with the feeling that a doctor would represent the hospital's views.

In pursuance of a Minimum Wage Law passed in Ohio, a minimum wage was fixed about one year ago, for women and minors employed in laundries. A study has recently been made of the wages and working conditions of women and minors employed in the serving of foods, housekeeping, and similar duties in anticipation of fixing a minimum wage for this group. Preliminary indications were that these regulations would be more drastic than those ordered for laundries, so that a group of commercial enterprises, either affected or to be affected, are considering legal suit to test the constitutionality of the law. The Ohio Hospital Association, however, took the viewpoint that the employees of hospitals were entitled to a fair wage, but that conditions relating to employment in hospitals were so different from those in industry, that hospitals should be given a separate classification, and so presented a request to the Department of Industrial Relations, which administers the Minimum Wage Law. It has just been announced that the Department recognized the justice of the request of the State Association and has granted the hospitals of Ohio the privilege of a separate classification.

Meeting of Presidents and Secretaries

The President, Secretary, and Chairman of the Legislative Committees of all state and provincial associations will be asked to meet in Chicago for a mid-year conference on February 17 and 18.

Mid-Year Meeting—Public Hospitals' Section, Association of Western Hospitals

The Public Hospitals' Section of the Association of Western Hospitals will hold its mid-year meeting at the San Luis Obispo County Hospital, San Luis Obispo, California, on Saturday, January 18, 1936.

Matters of primary importance to public institutions will be presented. The chairman, Mr. A. C. Jensen, has arranged the following program:

1. (a) Discussion of general policies.
   (b) Consideration of adoption of standards of policy for tax-supported institutions.
   (c) Pay patients in County hospitals.
2. Round table discussion of general administrative problems.
3. Round table discussion of development and maintenance of buildings and physical plant.

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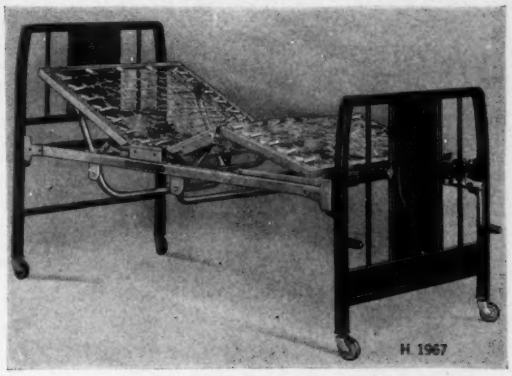

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ONTARIO

The annual meeting of the Ontario Hospital Association was held in Toronto during the week of October 15. The Reverend Georges Verreault, O.M.I., of the University of Ottawa, was selected as President, and Dr. Fred W. Routley of Toronto was re-elected Secretary and Treasurer.

The Ontario Hospital Association has made an agreement with the Canadian Automobile Underwriters Association, whereby the Association agrees to protect hospitals and doctors through their membership in the settlement of indemnity paid on automobile public liability policies. Doctors are allowed their minimum fees according to a schedule adopted by the Ontario Medical Association, and the hospitals receive $3 per day. The companies agree to instruct their adjusters to secure the release of claimants and issue checks directly to the doctors and the hospitals, as far as possible. Committees are set up to consider complaints and adjust any difficulty in the working out of the agreement between the insurance companies and the doctors and hospitals. This same agreement has operated successfully in Manitoba for the past six years.

CANADIAN HOSPITAL COUNCIL

The Canadian Hospital Council, composed of representatives of all the hospital associations in Canada, met the week preceding the meeting of the Ontario Hospital Association. Committees which had had under study various phases of hospital practice made excellent and exhaustive reports. These are to be published in book form. The Council voted to take over the editorial direction of "The Canadian Hospital." Financial arrangement is being entered into with the owner whereby the Council can purchase the Journal at a later date if desirable. Accordingly, "The Canadian Hospital" will become the official hospital magazine of the Canadian hospitals. Mr. W. R. Chenoweth, superintendent of the Royal Victoria Hospital, Montreal, was elected President, and Dr. G. Harvey Agnew continues as Secretary.

Conference of State Secretaries

Pursuant to action taken at the organization meeting of the Province and State Secretaries' Conference at St. Louis, a program is being formulated for their mid-year meeting which will be held Monday, February 17, at the Palmer House, Chicago. This will consist of round table discussions devoted to such topics as Sectional Convention Exhibits, Rotation of Sectional Convention Dates, Development of Speakers' Bureau, Sectional Publications, Financing of the Sectional Associations and Development of Membership under the leadership of Secretaries who have been successful in these activities.

Meeting of the Council on Community Relations and Administrative Practice

The meeting of the Council, advisory to the Trustees, on Community Relations and Administrative Practice, was held on December 6 at the offices of The American Hospital Association, Chicago. Those present were: Dr. G. Harvey Agnew, E. Muriel Anscombe, Mary H. Bachmeyer, Dr. R. C. Buerki, Dr. Michael M. Davis, *chairman*; Dr. Nathaniel W. Faxon, Monsignor Maurice F. Griffin, Dr. B. C. MacLean, Dr. C. W. Munger, Robert E. Neff, members of the Council, and Dr. C. Rufus Rorem, Dr. B. W. Caldwell and A. E. Hardgrove, by invitation.

A considerable portion of the Council's time was devoted to four questions concerning public policies of present importance to hospitals, outlined by Dr. Goldwater, which are printed elsewhere in this issue. On one of these matters, the following statement, representing the policy favored by the Council, was adopted for transmission to the Trustees:

"General hospitals maintained by city, county, or state governments exist in less than one-seventh of the counties of the United States and in many of these are not nearly large enough to provide for the number of sick persons in the locality who need hospital care and who cannot pay for it. On the other hand, the general hospitals maintained by voluntary non-government agencies now provide more than two-thirds of all the general hospital beds in the United States and in the majority of communities offer the only facilities for the care of persons unable to pay. The income received by these hospitals from paying patients and from private charitable gifts is, however, as a rule quite insufficient to permit these voluntary hospitals to supply the amount of free care which is needed in their locality.

"The medical profession and the voluntary hospitals have traditionally accepted care for the sick poor as a service to the community and have done their best to render this service. In some states, through recent efforts of the state and hospital associations and local hospital councils with the cooperation of public-spirited citizens, county and state governments in many parts of the United States recognized that public funds may be used to supplement private funds to provide this service and have accepted the policy of payment to voluntary hospitals from public funds for the care of the sick poor.

"It is the opinion of The American Hospital Association that where beds are available in well-equipped and properly located voluntary hospitals, and where local governmental hospitals do not exist or are insufficient, government funds should be used to pay for service to the poor in these voluntary hospitals at a reasonable rate for each day's care rendered, whenever such voluntary hospitals by the volume and character of their charitable work, may be considered as eligible for such supplementary financial aid. The American Hospital Association urges state and local hospital associations to work

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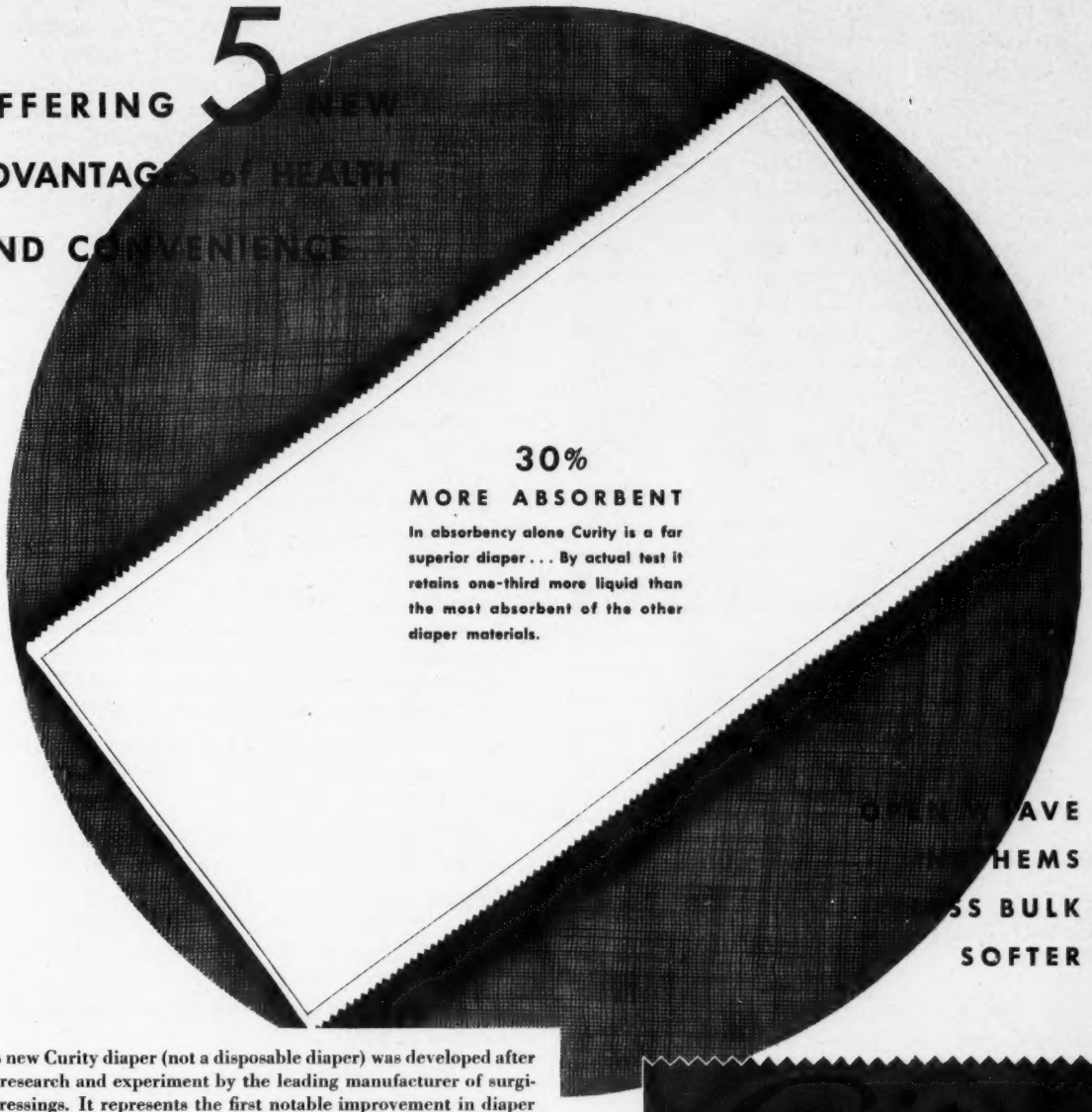
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MORE ABSORBENT
In absorbency alone Curity is a far superior diaper . . . By actual test it retains one-third more liquid than the most absorbent of the other diaper materials.
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This new Curity diaper (not a disposable diaper) was developed after long research and experiment by the leading manufacturer of surgical dressings. It represents the first notable improvement in diaper construction in many years, and was scientifically designed to meet the medical profession's present-day enlightened ideas of a diaper's functions and purpose.

It is made of an entirely new type of material created specifically for this one use—a light, airy, open-weave fabric which has all the desirable characteristics of a surgical dressing. It allows free, soothing circulation of air on baby's skin. Made of two layers of fabric woven together with one smooth selvage, it has no hems to make ridges in tender skin. Yet while this fabric is lighter in weight and much less bulky, it is actually 30% more absorbent than any of the traditional diaper materials.

From a purely practical standpoint these new Curity diapers wash more easily; dry faster in the tumbler, drying room, or out-of-doors, and compare favorably with any other material in wearing qualities. And while unquestionably a great improvement, they are competitive in price with other diapers. A sample will tell you more than we can say. Write for one.

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with state and local welfare authorities and with emergency relief administrators, with the aim of securing adequate appropriations of public funds to pay for care rendered to public charges in governmental or in voluntary hospitals."

Dr. C. Rufus Rorem, who is consultant on group hospitalization for the Association, presented a report which is later summarized in this issue.

Dr. R. C. Buerki, chairman of the Division on Hospital Medical Practice, reported that an addition relating to the small hospital was being added to the already prepared Manual on Maternity Care; that the qualifications for clinical laboratory technicians, X-ray technicians and physical therapy technicians were ready for publication; that a handbook had been issued by the Advisory Board for Medical Specialties which his Division recommended to be sent to all Association members.

Dr. C. W. Munger, chairman of the Division on Nursing, reported that its study of Nursing Practice in Hospitals, made in cooperation with the National League for Nursing Education, was ready for publication.

Dr. B. C. MacLean, chairman of the Division on Accounting, reported that several hundred copies of the manual, *Hospital Accounting and Statistics,* had been sold.

Mrs. Mary H. Bachmeyer, chairman of the Division on Hospital Councils, reported recent progress in securing speakers in various parts of the United States on the subject of hospital councils and in preparation of an annual report form to be submitted to hospital councils for the accumulation of data.

Group Hospitalization Expands Rapidly in 1935

The year 1935 witnessed the establishment of a score of new plans by which people of moderate means can budget hospital bills through regular payments of from 50c to 85c per month. The number of subscribers has increased from 100,000 to more than 300,000 employed persons.

The New York City plan, with more than 140 participating hospitals, enrolled 35,000 subscribers in seven months. Cleveland, Ohio, reached 15,000 employed members on November 1st, not including dependents. Rochester, New York, reported 12,000 subscribers and 10,000 dependents on December 1st. The merging of the St. Paul and Minneapolis associations brought a rapid increase in membership during the summer months, with a growth of from 3,000 in July to 10,000 in November. New Orleans now has 15,000 employed subscribers, and Sacramento, California, and Washington, D. C., have passed the 10,000 mark. The plans in Dallas, San Antonio, and Houston continue to grow.

City-wide plans established during 1935 include those at Geneva and Syracuse, New York; Kingsport, Tennessee; Norfolk, Virginia, and the statewide Hospital Savings Association of North Carolina. Geneva and Kingsport are communities with but one hospital. Committees are at work on group hospitalization plans in St. Louis, Missouri; Baton Rouge, Louisiana; Richmond, Virginia; Muncie, Indiana; Louisville, Kentucky; Los Angeles, Oakland, and San Francisco, California.

During the past year, the state legislatures of Illinois, Alabama and California have enacted special laws facilitating the formation of non-profit hospital service associations.

Medical practitioners with experience in hospitalizing subscribers approve thoroughly of group hospitalization. City-wide polls of the medical profession are being made in New York, Dallas, New Orleans, and Cleveland, and will be summarized in forthcoming publications of The American Hospital Association.

At a meeting during the autumn, John McNamara of Cleveland, J. Douglas Colman of Newark, Frank Van Dyk of New York, and Sherman D. Meech of Rochester agreed to maintain uniform financial records and to accumulate uniform service statistics. It is expected that, from their experience, records and reports can be developed adaptable to other hospital service associations.

The American Hospital Association, through the Council, has reaffirmed its approval of group hospitalization according to the standards established three years ago, namely: emphasis on public welfare, free choice of hospital, exclusion of private physicians' fees, non-profit sponsorship and control, economic and actuarial soundness, efficient and dignified administration.

With the Patient's Best Wishes

A hospital superintendent reports having received a letter such as this:

"Dear Mr. Hospital Superintendent:

I got your letter about that hospital bill which I owed you. Now, Mister, please be pachunt wid me. I actually ain't got it now. If this was Judgment Day and you were no more prepared to meet your Maker than I am to pay this hospital bill you sure would have to go to hell.

Trusting that you will do this,

Yours very truly."

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a long, prosperous and
constructive life to

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FOR A GREAT many years the operating table pad has presented a serious problem. Surgeons and operating room supervisors know about that. It so happened that many years ago a man by the name of Charles Karr in Holland, Michigan, invented a bed spring, ingeniously simple, yet, said by thousands of users, to deliver an extraordinary amount of comfort. The Karr organization grew to know something about hospitals because it was in hospitals that they first introduced their Spring-Air Cushion. When they applied the Karr Spring idea to that highly important spot in every operation—the back of the patient, they did something which all hospital people are working their heads off to do—increase the comfort of the patient. The Karr people are enthusiastic when they demonstrate the utter simplicity and high efficiency of this very important item.

IT LOOKS as though the old-fashioned cloth diaper for babies were going into the horse and buggy class at last, because Lewis Manufacturing Company tell us that this year they plan to offer to hospitals their Curity Layettecloth diaper. Their bid for the favor of hospital superintendents lies in the facts that these diapers wash easier, dry faster, have no hems, are porous, lighter and have greater absorbency. You will be interested, no doubt, if you have many bassinettes in your hospital.

WHEN THE MAN who does the buying for a hospital gets home at night he must sometimes, at least if he has any imagination, wonder about the ingenuity of the men who make some of the products he buys. For years on end hospitals have bought cotton for surgical dressings—and for as many years it had to be rolled into balls. Somebody connected with Johnson & Johnson one day had a machine made which now produces uniform ready-made cotton balls, relieving the hospital and nurse of the tedious task of preparing these dressings. They come in three sizes. They say that in a box carrying 4,000 of these balls, no two can be found to differ in the slightest respect.

THERE HAVE been most gratifying strides made in the improvement of mechanical apparatus used around hospitals. And now here comes The Vestal Chemical Company with a new floor machine. In a description sent us, they point out that they have reduced vibration, and therefore noise, by lowering the center of gravity of the driving mechanism. This, with the weight balanced accurately, they claim, assures uniform pressure and uniform speed of the motor resulting in the elimination of whirring noises and "wandering" or resisting the operator. They make quite a point of the power developed by the use of helical gears. According to their description, the other features such as the design, the handle, and the safety switch are the latest.

EVERY HOSPTAL superintendent knows that the comfort of a patient in bed is a pretty vital point in hospitalization. The hospital bed has had a lot of study. The American College of Surgeons have approved the new Gatch bed made by Frank A. Hall & Sons and shown at the American Hospital Association meeting in St. Louis. Mr. Hall tells us, quite simply, that they have succeeded in adapting and building into their Gatch frame (on a new principle) the principle of the home box spring. It makes a cushion without a cross support of any kind so that there is no hard surface or side sway. Mr. Hall makes a feature of the fact that a Horse Hair mattress can be used on this Gatch bed.

THIS MATTER of sterilization in hospitals is one that has made many a superintendent do a lot of worrying at one time or another. The wise buyer has a wide open ear for information on improved methods because of what correct sterilization means to his institution. We get word from Archibald W. Diack, the Chemical Engineer who makes Diack Controls, that they have two improvements on their Controls. Your operator can now place Diack Controls at the heart of even the largest dressing bundles and extract the Control for examination without disturbing the dressing bundle. Also they have a uniform melting point. The cylindrical tables can touch the glass tube at only one point, thus insuring a uniform melting temperature and a gradual fusion of the tablet to meet time-temperature ratios ample for sterilization.

THERE SEEMS to be a great deal being written about Intravenous Therapy these days. And manufacturers are putting their best foot forward with improved equipment. For instance, V. Mueller & Company tell us that they have something new for hypodermoclysis and intravenous therapy. Apparently they have given special thought to the simplification of technique. For example, with their new equipment you use the same flask for preparing and administering the solution. Solution flask, needles and tubing are sterilized together with one handling. The flask has two scales, one graduated to show contents, the other to show amount administered. Other details of the equipment are of the improved modern type.

MARKING LINENS is one of the those important details which comes under the eye of your housekeeper. The Applegate Chemical Company are primarily indelible ink manufacturers. But they also took over the making of markers to help solve your problem of marking linens and even blankets and bath towels. They have a new Foot Power Marker which they describe as being made in one solid casting so that the movable parts never need adjustment. They stress the fact that the marking dies are deeply

Physicians who have visited the laboratories in which Petrolagar is made have often expressed surprise at the unusual precautions taken to assure accuracy in the manufacture of this most palatable mineral oil emulsion. Here, in the home of Petrolagar, is to be found every practical scientific instrument obtainable for the purpose of testing and retesting raw materials and the finished product • Most important, however, in the preparation of this fine pharmaceutical, are the human minds and hands that direct and use the instruments provided in the Petrolagar control laboratories. Minds trained in the best universities and hands skilled in the techniques essential to accomplishment—enable us to cooperate with physicians in the successful treatment of constipation.

Petrolagar Laboratories, Inc. * * * Chicago

Petrolagar is a mechanical emulsion of pure mineral oil (65% by volume) and agar-agar, prepared in Five Types for the treatment of constipation.

hand-carved from solid metal plate. You can use any size letter that will go into a space 2½"x6½" and the name, date and department are all marked at one impression.

A GREAT many things happen when a new industry like air conditioning springs up. The industry is hardly out of swaddling clothes and yet Wilmot Castle Company got busy and applied air conditioning principles to baby's crib. Result is the Castle Humidicrib. It is really a newly developed Infant Incubator. Here's what they say it will do—Automatically maintain any desired degree of humidity above room conditions—automatically control temperature independent of humidity—air circulation without fans or noise and filtered. They will tell you that it is completely flexible so that it can supply the specific air condition indicated for each infant—in fact, they call it a precision piece. When you finish reading their description of its benefits you have the feeling that incubator infants are going to have a better chance than they ever had. Wilmot Castle Company have a right to be enthusiastic.

SO MANY worth-while new developments in all lines of manufacture these days that to keep posted a superintendent and his buyer have to be on the alert. This new anesthetic gas which E. R. Squibb and Sons are now offering is typical. They tell us this is the only gas which produces sufficient relaxation and is potent enough for major surgery. The hospital superintendent is told that its administration requires special training and involves the use of a suitably equipped gas machine. The gas is called Cyclopropane Squibb and it comes in a distinctly new type container called the Amplon. This Amplon holds some interest for the buyer and the operating room supervisor because Squibb says it provides the great advantages of convenience, economy and safety—three big factors in any operating room—every day in the week.

THOSE SUPERINTENDENTS who have a flare for keeping their hospital service equipment strictly up-to-date, will be interested in the announcement which comes to us from the General Electric X-Ray Company. They have a new Hemolator which is scheduled for early production. G-E engineers have apparently achieved something that will be intensely valuable in treating patients suffering from obliterative vascular disease. The affected part is inserted in an airtight "boot," fabricated of a cellulose-acetate material. A motor driven pressure pump then supplies alternating negative and positive pressure at a predetermined and adjustable rate of change and, of course, predetermined volume. Men like deTakats, Herrman, Reid, Gibbon and Landis have found that this Hemolator diminishes cyanosis, relieves pain and claudication and promotes healing of trophic ulcers. They have worked out definite technics. The G-E engineers make a point of the completeness of control and accuracy they have developed—all regulated from an instrument panel.

THE DAY that color came into hospitals was a great relief for the personnel. Who has forgotten the bleak, monotonous whiteness of the interior of the hospital? We hear from the Marvin-Neitzel Corporation that white operating gowns and linens are being replaced with colored ones by more and more hospitals. The reason usually given is interesting. Colored cloth does not reflect the blinding light rays from the operating lamp. Eye strain is much lessened. In their experiments they have found that gray, blue and green are probably the most effective and most frequently used.

THE SUBJECT of rubber bed sheeting is one that many superintendents are inclined to experiment with because mattress protection is so important. Our attention has been called by Hospital Import Corporation to their new "Spongegrip" Rubber Bed Sheeting. Prominent among their claims for it are that it clings to the mattress wherever placed, making wrinkles impossible. Less heat induction, no straps or clamps, may be sterilized by boiling, washed with soap and water, pliable, comes in maroon or white or fawn, standard cut sheet size or in rolls, are other salient features which were pointed out to us.

THERE IS considerable interest these days on the part of hospital superintendent in Physical Therapy Departments. Interesting developments are taking place in the equipment. Some very clever devices have been installed in many hospitals. Now comes an invention by Dr. Norman E. Titus, who heads the Physical Therapy Department at the Medical Center, New York. It is called the new Titus Portable Hydro-Massage Whirlpool Bath. Hot water is mechanically agitated and aerated. Ille Electric Corporation, who distribute this new bath, wrote us a very interesting description of its applications in orthopedic, surgical and physical therapy practice. Of special interest to our readers is that this new bath requires no plumbing job to install and it is easily transported from one room to another, or to the bedside. It uses only the amount of water required for each treatment.

MODERN SURGERY is constantly challenging the ingenuity of manufacturers who supply the instruments. And scientific manufacturing has gone a long way to keep up with the challenge. Improvement follows on top of improvement. The rapid advances in surgery are no doubt the inspiration for manufacturers. Bard-Parker Company went to work on a detachable blade design and they notified us that they now have a new Rib-Back blade. They are interesting the hospital buyer in the fact that this new blade possesses far greater strength and rigidity than the old flat blade. Important to the hospital buyer, Bard-Parker says, is the elimination of glove cutting, effecting an economy. It is interesting to know that they claim Rib-Back blades are uniformly sharp and hence reject free.

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5. Has the garment been sized properly for your use?
6. How does the real cost* compare with that of competitive garments?
7. Is the manufacturer one who stands behind his merchandise?

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LITTLE THINGS in the management of a hospital often make or mar the smoothness of the service. We think one of the secrets of successful management you often find is the ability to foresee needs—to be ready for any emergency. Manufacturers are constantly contributing short cuts to efficient service. Take, for example, the new Restraining Rail which The Simmon's Company seem glad to introduce to hospitals. The moment the need arises, an orderly can turn any bed into one with Restraining Rails in a jiffy. The Simmon's rail is equipped with easily operated clamps at each end permitting the rail to be attached to any regular hospital bed. Loosen one clamp and the rail swings downward allowing easy access to the patient. Simmons have made the rail adjustable in length to take care of the variations in hospital beds. Many a hospital superintendent will be glad to know about this new item.

HOSPITAL TECHNIQUE reaches the highest point of efficiency when it is aided by foolproof mechanism. And it takes expert, scientific thinking and planning to produce the answer to many problems. Perhaps one of the meanest problems which has stared hospital managers in the face is the old bed pan with the ever-present possibility of infection spread. After we had read the description, which American Sterilizer sent us, of their new Aeroflush Bedpan and Urinal Washer and Sterilizer, we were impressed by the clean-cut, high-grade job they have done. Any need for the operator to touch the cover or valve handles with possible soiled hands has been eliminated. Both cover and water flushing valves are foot actuated. Sterilizing valves have lever handles, conveniently controlled by the forearm. The apparatus has all the earmarks of a highly intelligent answer to a serious problem. They show you that they have used every modern contrivance to make this bedpan washer do what any hospital expert would like to see done. It is very convincing.

Renovation of Pillows

Pillows may be either washed or steam cleaned.

To wash them place in a light net or bag to prevent loss of feathers and use the same formula as for woolens except that due to the tightness of weave of the pillow cover it is necessary to run the rinse five minutes instead of two minutes or better yet to extract after each rinse. After washing and extracting dry in the drying tumbler which will do much toward restoring the fluffiness of the feathers. Goose and duck feathers respond to this process very well, chicken feathers not so well.

In steam cleaning the feathers are removed from the cover, the feathers dry steam cleaned and the covers laundered. Care should be taken to secure a reliable firm to do this as cut-rate and unreliable firms do not always return all the feathers taken out of the pillows.

Motor Vehicle Accident Cases

The National Safety Council estimates 35 non-fatal to one fatal injury in motor vehicle accidents and the number of fatal injuries for 1934 as 36,000 thus giving an estimate of 1,240,000 non-fatal or 1,276,000 total injuries for the year.

Of the total deaths from motor vehicle accidents in 1934, 2,286 occurred in Ohio indicating by the above ratio a total of 80,010 non-fatal injuries, or 82,296 total injuries, fatal and non-fatal.

The State of New York reports its motor vehicle accidents for 1934 in 8 categories as follows:

1.	Fractured skull	855
2.	Fractured spine	55
3.	Concussion brain	7,768
4.	Severe general shock, contusion and laceration	11,600
5.	Slight shock and shakeup	74,301
6.	Internal injury	1,114
7.	Other sprains, bruises, etc.	5,408
8.	Not stated	3,697
	Total	106,348

Assuming hospitalization for groups (1), (2), (3), (4) and (6) we have an estimated total of patients hospitalized as 20,392 or 19.2 per cent of total accidents. Applying this percentage of hospitalized cases to the total injuries reported for Ohio for the same year we have an estimate of 15,900 as hospitalized cases in Ohio during 1934.

The reports of the National Safety Councils indicate that 27.5 per cent of all accidents occur in the first four months of the year. Applying this rate to the estimated number of hospitalized cases in Ohio for the year 1934 we find a probable 4,372 cases hospitalized in the first four months in Ohio.

New Nursing Legislation—1935

ARIZONA NEW LAWS, 1935

S 174. Requires that any person in charge of nursing, nurses, attendants and aids in any institution of health or welfare or in any hospital supported in whole or in part from public funds shall be a Registered Nurse.

S 175. Authorized the appointment of a state supervisor of public health nursing under jurisdiction of state superintendent of public health.

CALIFORNIA NEW LAWS, 1935

A 1569. Applicants for examination must be twenty-one years old, graduates of a thirty-six months' course in an accredited school. Accredited school is defined as one operating in connection with a hospital, approved by the board. Theoretical instruction shall be of such subjects and duration as prescribed by the board, and practical shall consist in required number of hours in care of medical, surgical, obstetrical and children patients.

(*Continued on page* 122)

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- HOSPITAL ABSTRACT SERVICE—Edited by Dr. W. P. Morrill. Latest information in condensed form on subjects of particular interest to hospital executives.
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The Hospital Book Shelf

THROUGH THE PATIENT'S EYES. By Sister John Gabriel, R.N. J. B. Lippincott Company. Philadelphia. 1935. $1.50.

This book discusses "Some of the reactions of patients to the various situations which the patient meets in the hospital or during convalescent care. The conduct of the admitting office, the work of the supervisors and the interrelation of doctors, nurses and patients are considered. May be used as a supplementary textbook.

DOCTORS AND JURIES; THE ESSENTIALS OF MEDICAL JURISPRUDENCE. By Humphreys Springstun. P. Blakiston's Son and Company. Philadelphia. 1935. $2.00.

This is a short and simply written book containing much information of value to hospitals, nurses and doctors. The subjects most often needed and asked for are cleverly selected, as, records and X-ray plates as evidence, and the liability of a charity hospital.

1,000 QUESTIONS AND ANSWERS ON T. B. Edited by Fred H. Heise, M.D. Journal of the Outdoor Life, New York City. 1935. $0.75

The questions and answers in this book are compiled from the questions and answers published in the "Journal of the Outdoor Life" during the past few years. The subject has been well handled by an experienced man and should be very helpful to the tuberculous patient who has never been able to ask his doctor all the questions which he wishes answered.

MANUAL OF CLINICAL CHARTING FOR GRADUATES AND STUDENTS OF NURSING. By Agnes Barrie Meade, R.N., B.S. J. B. Lippincott Company, Philadelphia. 1935. $1.50.

"This excellent work has been carefully prepared and is extensive in range as well as complete in detail" says the foreword by Dr. MacEachern. The book is simple in arrangement and will be valuable to students who are learning charting.

THE STORY OF MEDICINE IN THE MIDDLE AGES. By David Riesman, M.D., Professor of the History of Medicine, University of Pennsylvania. Paul B. Hoeber, Inc. New York City. 1935. $5.00.

The history of medicine and surgery from the time of the School of Salerno through the time of Paracelsus is traced in this volume. The work of the Arabian and Jewish physicians, the great plagues, the rise of surgery and the origin of hospitals are discussed among other subjects. The attitude of the public toward medicine of that period is included.

Consider the Surgeon's Hands

During the surgeon's regular activities outside of the operating room his hands suffer the same exposure as that of the ordinary layman.

Like any other man, his hands have no particular protection against dirt, excoriation, infection or exposure in general.

Yet within 15 minutes or less the surgeon must not only scrub his hands to surgical cleanliness, but he must also make them soft and responsive at the same time.

Only a scrub-up soap with the properties of Septisol can meet these drastic requirements.

Septisol makes the surgeon's hands surgically clean in minimum time.

But Septisol also conditions the hands. The fine oils in Septisol correct skin dryness—alleviate chafed, raw irritations. The creamy Septisol lather gently floats the dirt loose, taking with it the dry, dead epidermis which otherwise dulls perception by minimizing the sense of touch.

Surgeons realize there IS a difference in scrub-up with Septisol. And they appreciate your consideration of a major personal problem when you supply Septisol. It is the type of consideration that encourages surgeons to make more frequent use of your hospital facilities.

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Septisol Dispensers are furnished in three models . . . the Double Portable (illustrated), the Single Portable and the Wall Type. All metal parts are Chromium Plated. They are simple in construction, dust-proof and easy to fill. May be used for dispensing alcohol.

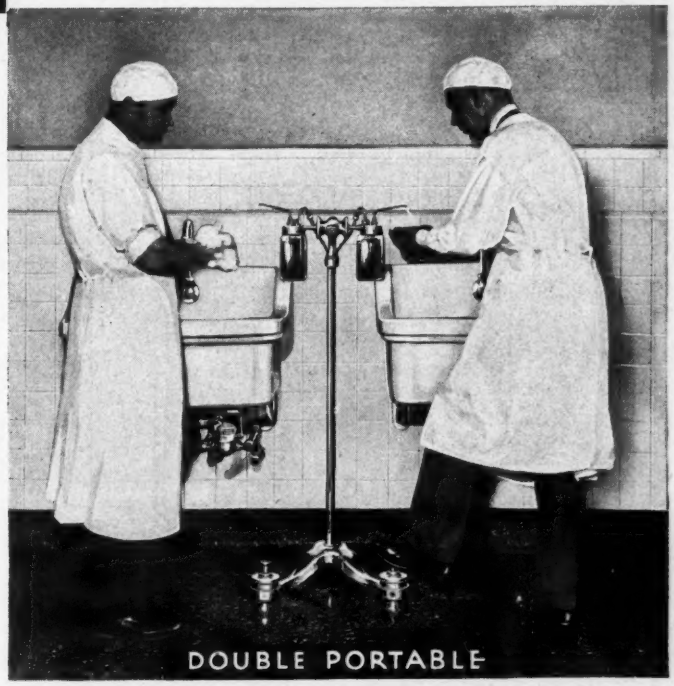
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Photo by Courtesy of Clara Barton Hospital, Hollywood, Calif.

TEXTBOOK OF ATTENDANT NURSING. By Katherine Shepard, R.N., and Charles H. Lawrence, M.D. Macmillan Company. New York City. 1935. $3.00.

The author has been teaching an attendant group for seventeen years and therefore her material is very well adapted to this type of student. In the chapters on tuberculosis, diabetes, arthritis, eye and ear conditions and elementary dietetics the author is assisted by specialists on these subjects.

The book is simply written and clearly arranged. One hundred lecture hours are included in the preliminary six months' course and one hundred and ten lecture hours in the second year nursing course.

PUBLIC HEALTH ADMINISTRATION IN THE UNITED STATES. By Wilson G. Smillie, M.D., Dr. P.H. Macmillan Company. New York City. 1935. $3.50.

A comprehensive survey of official and voluntary public health work and their relation to the practicing physician is given in this volume. The advantages and disadvantages of different types of organization and administration are discussed. Supplements Rosenau's "Preventive Medicine and Public Health."

ART OF PUBLIC HEALTH NURSING. By Edith S. Bryan, Ph.D., R.N. W. B. Saunders Company. Philadelphia. 1935. $2.00.

The author says in her introduction that "This book has been written with the realization of the fact that every approach made and every service rendered in public health nursing leaves its impress indelibly printed on the person served or the situation involved." The book contains a detailed discussion of infant welfare nursing, school nursing and industrial nursing. The need for special training in public health nursing is emphasized.

THE CONSTRUCTION OF MODERN HOSPITALS AND THEIR EQUIPMENT, A TECHNICAL AND PRACTICAL MANUAL. Cloth, Pp. 666, 900 illustrations. Edited and published by M. Schaefer, S. A. Berne, Berne, Switzerland. Prices: Swiss francs 40.

This volume constitutes an ambitious attempt by a Swiss firm engaged in the manufacture and supply of equipment and appliances for hospitals and medical institutions to present their ideas and those of their collaborators on the trends in hospital planning, construction and equipment. There is an introduction by Prof. F. de Quervain, director of the surgical clinic of Berne University and in the compilation of the work acknowledgment is made of the collaboration of Drs. Arnd, Kocher and Savel, all of whom are distinguished professors of that country. A short historical sketch outlining the evolution of hospitals from the time of Hip-

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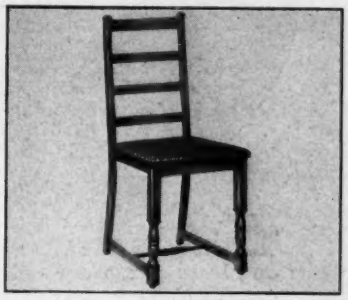

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pocrates in the 5th Century B.C., through the period of the appearance of the public hospitals or Nosokomia in Rome in the 9th Century A.D., on down to the present day, constitutes the preface.

The subject matter is well arranged, commencing with the planning and construction of hospitals and the various units and departments thereof, followed by chapters on disinfection, sterilization, and equipment.

New Nursing Legislation—1935

(*Continued from* 117)

Schools maintaining a course in addition to the required thirty-six months' course must be in a hospital having a daily average of not less than 100 patients and shall give such instruction as board may determine.

CONNECTICUT NEW LAWS, 1935

H 856. Registered nurses fee $10.00. Male nurses substitute genito-urinary diseases for obstetrics. Licensed attendants fee, $5.00. Training of not less than 12 months. Examined in child care, care of medical and surgical patients, and the preparation of food, or the care of the mentally sick. Certificate of three years' experience with remuneration and endorsement of two physicians and two former employers—prior to this date, gives license without examination.

Provides an appeal board consisting of one member State Medical Society, one member State Homeopathic Society and one member Connecticut Hospital Association. Findings are binding on Registration Board.

License revocable, subject to appeal to Superior Court for excessive use of drug, conviction of felony, conviction of crime in practice of profession or wilful false representation to board.

Limits practice to those having R.N. or T.A.

ILLINOIS NEW LAWS, 1935

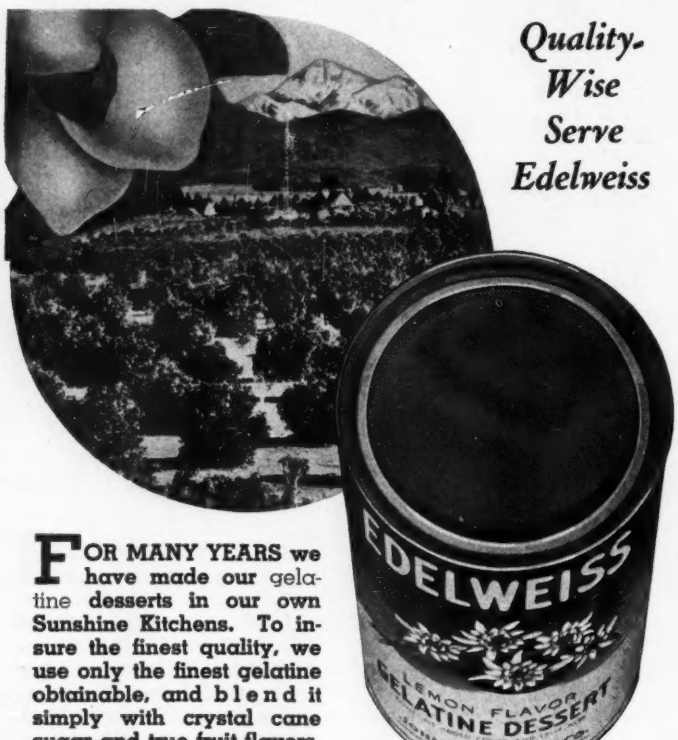
S 517. Empowers Board of Registration and Education to provide rules and conduct examinations for registration, prescribe rules for determination of reputability and good standing of school, adopt rules for uniform and reasonable standard of maintenance, instruction and training, establish standards of preliminary education, conduct hearings on proceedings to revoke or refusal to issue license and to revoke or refuse license.

All of foregoing actions to be exercised only on action and written report of examining committee consisting of five R.N.'s of five years' experience, at least two of whom shall have had at least two years' experience in educational work in nursing.

Revocation or refusal to renew may be based upon violation of law relating to habit forming drugs, to abortion, fraudulent representation, gross negligence in practice of nursing, continuing in practice while suffering with a contagious disease, habitual drunkeness or drug addiction.

VERMONT NEW LAWS, 1935

H 44. Board of Registration to consist of one physician who has had two years' experience in instruction of nurses and two R.N.'s who have had five years' experience in nursing and "shall have had experience in teaching."



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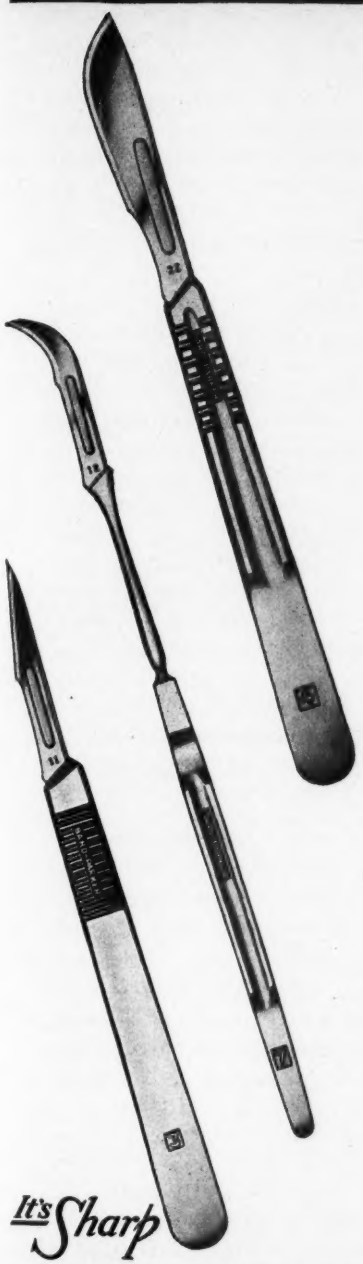

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BARD-PARKER
Rib-Back Blades

are inspected individually to insure superior cutting uniformity . . . an economy to the surgeon.

Each blade is subjected to rigid inspection after every step of production. Blades failing to meet our high standards are rejected immediately. They do not reach the operating room to be rejected by the surgeon. This is an economical feature of importance.

Blade economy cannot be computed on quantity purchase price alone. The satisfactory utilization of each and every blade purchased must be considered in the final analysis.

Ask Your Dealer

BARD-PARKER COMPANY, INC.
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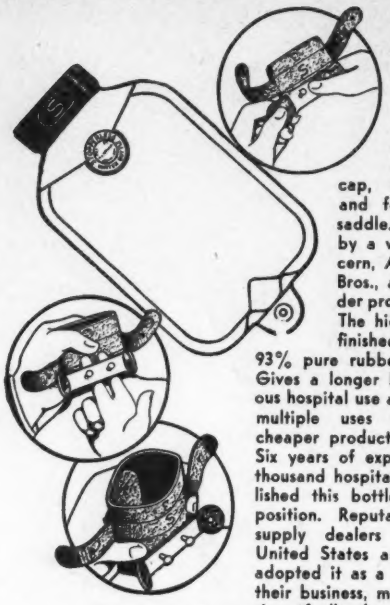
It's Sharp

A BARD-PARKER PRODUCT

STOPPERLESS PRODUCTS

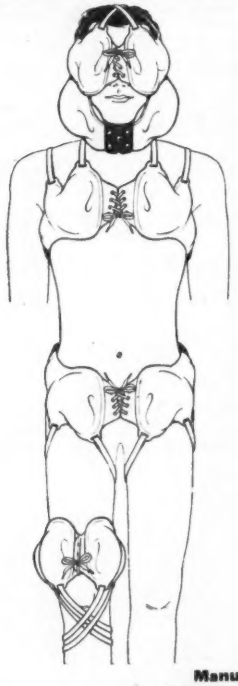


The only outstanding improvement in a water bottle in a generation.
A non-leaking guaranteed water bottle, ice cap, fountain syringe and form fitting pak-saddle. Manufactured by a world famed concern, A. G. Spalding & Bros., and designed under professional scrutiny. The high quality of the finished product being 93% pure rubber.
Gives a longer life under strenuous hospital use and because of its multiple uses discourages the cheaper product.
Six years of experience with five thousand hospital users has established this bottle in pre-eminent position. Reputable surgical and supply dealers throughout the United States and Canada have adopted it as a standard item of their business, many to the exclusion of all other makes.

HOSPITAL SPECIALTIES

Stopperless Standard Water Bottle and Ice Bag
Stopperless Fluted Water Bottle and Ice Bag
Stopperless Fabric Lined Water Bottle and Ice Bag
Stopperless Saddle Pak Water Bottle and Ice Bag

Sold by representative distributors throughout U. S. A. and Canada. Write your distributor for price list.



Introducing the new form fitting throat combination non-leaking hot or cold "Pak-Saddle."

It gives coverage to the infected parts of the throat and ears never before obtainable in a throat bottle.

Can be applied to other portions of the body where either hot or cold applications are required.

Useful in cases of Salpingitis, Appendicitis, Cystitis, Cholecystitis, Head Injuries, Synovitis, Myositis, Phlebitis of the Extremities, Conjunctivitis, Mastitis, or Rectal Pathology.

Posesses all the advantages common to the patented Stopperless feature.

▼

Patented, U. S. A., Canada, England, Australia, Germany

Manufactured by
A. G. SPALDING & BROS.
for
STOPPERLESS WATER BOTTLE CO.
CHICOPEE, MASS.

Some Public Issues of Special Present Importance to Hospitals

HOSPITALS are concerned with public issues that are brought into prominence, and which affect their administration, professional service or their income. The list of questions and answers submitted will serve as a basis for sound consideration of all our hospitals, more particularly our voluntary institutions.

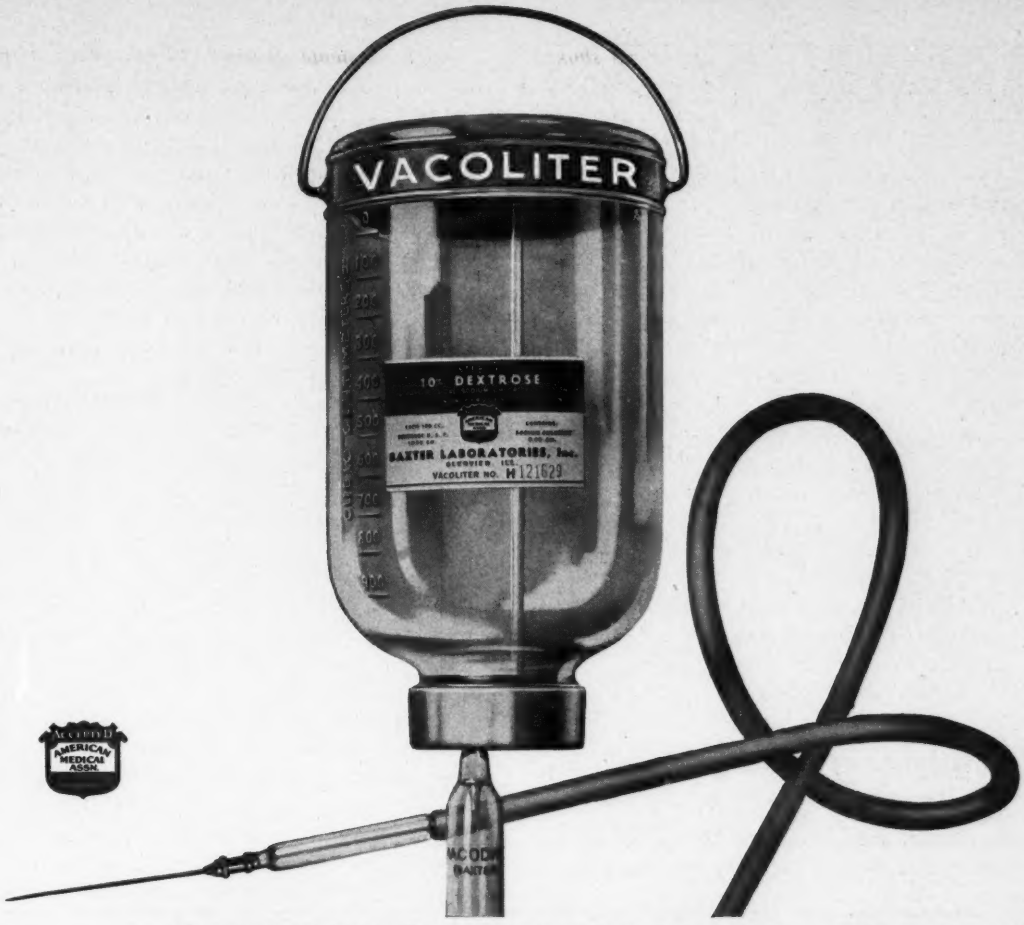
1. *On what elements should voluntary hospitals depend for financial support in the future?*

A. *Capital funds.* Funds for buildings and major equipment for voluntary hospitals have come in the past from private sources and will in the main continue to do so, in so far as reconstruction and expansion of voluntary hospitals is required in the cities. Future capital expenditures for voluntary hospitals should be related to the needs of the community rather than to the desires of individual institutions. This is an increasingly important question in many communities.

B. *Current maintenance.* A majority of voluntary hospitals depend primarily on income from patients. Endowments are significant only in a small number of hospitals, mostly teaching institutions. Support from periodic payment plans may become extremely important. Grants from community chests are now made to hospitals in approximately 60 cities. Donations from individuals, while important to some hospitals, are not a safe reliance for those voluntary hospitals which are called on to do any considerable volume of free work. Public grants out of tax funds are of increasing importance to voluntary hospitals. The status of voluntary hospitals as community services may be threatened by requests that all their free work be paid for. To what extent should part-pay work be expected to be financed by voluntary gifts and wholly free work by tax funds?

2. *Shall The American Hospital Association and the state and local hospital associations focus attention on securing state and local tax funds for hospital and clinic care of relief and other medically indigent cases?*

The present federal policy of turning responsibility over to the states and localities furnishes a logical occasion for bringing demands upon the state and local relief administrations. In many states no legislation is necessary to enable payments to be made for hospital and clinic care for relief cases or other persons who are public charges. In many states and localities, reorganization is taking place which will put the relief administrations on a permanent basis or which will enlarge the scope of existing welfare departments to include what has thus far been carried under a special emergency



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IT is a part of the Baxter creed that men and companies are capable of consistent progress. Thus, doing a thing well at Baxter Laboratories is but a step toward the ultimate objective of doing that thing *supremely* well.

The Baxter solution you use today is superior to the solution you used twelve months ago. And the solution you use twelve months hence will be finer, because Baxter's goal is a quality *ideal* to be reached even though necessity has been satisfied and complete usefulness achieved.

Baxter experts are imbued with the desire to outdo tomorrow, that in which they take great pride today. This perpetual striving for a quality ideal is your certain assurance that all your solution problems are *safely* entrusted to Baxter.

Baxter quality is made impregnable because Baxter regards each completed task on the path to perfection as but the laid ground work for a larger job to start tomorrow.

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BAXTER'S INTRAVENOUS SOLUTIONS IN VACOLITERS

relief administration. Policies may thus be set which will last for some years.

Largely through the efforts of local hospital groups, several states have already adopted the policy of paying for the care of relief cases in local hospitals, e.g., Illinois, New Jersey. Clinic care is paid for in Illinois, a very important element both to hospitals and to people on relief. The study made jointly by The American Hospital Association and the Bureau of Medical Economics of the American Medical Association shows that the policy of using public funds for the care of indigent in local voluntary hospitals is widespread.

3. *Federal Expenditures for Care of Patients in Voluntary Hospitals. Under the policies of federal relief as now announced, is it worth while continuing the effort to secure federal grants from relief funds for the care of the indigent in voluntary hospitals?*

Federal relief funds, it is declared, will be hereafter utilized only through the states. There will be no federal expenditures for direct relief (except possibly for transients). No medical care will be furnished W.P.A. clients except those provided for under federal Workmen's Compensation Laws, i.e., persons injured in the course of their occupation. The use of federal relief funds for hospital care would involve a change in the whole general policy of federal relief as now stated by the President.

4. *What should be done to promote unity within the hospital field and particularly to avoid cleavage between the governmental and the voluntary hospitals?*

Extent to which the government has entered the general hospital field. Of the 3,000 counties in the United States only about 500 have governmental general hospitals, excluding federal hospitals. Less than 50 of the 500 have state hospitals; about 450 have city or county general hospitals.

There are about 1,200 counties with only non-governmental general hospitals.

Of the 93 cities with over 100,000 population 60 or about two-thirds have one or more general hospitals under local governmental auspices.

On the other hand, there are 128 counties in the United States in which a local governmental hospital is the only hospital available in the whole county. These counties have a population of about 3,000,000. The hospitals in these counties have only about 5,000 beds. This is an average of only about 1.6 beds per thousand population, and actually in a large proportion of the counties the ratio is lower than this. Almost everywhere it is true that the governmental general hospitals do not provide sufficient beds for the whole population of the localities which they serve.

Qualitative improvement of governmental general hospitals is important. These hospitals generally

DESK DIAGNOSIS WON'T DO FOR YOUR LAUNDRY DEPARTMENT!

WHEN traffic through your laundry department is constantly in a jam — when clean-linen costs are climbing—chances are you don't know *what* the trouble is. Possibly it is a service-worn Washer or Extractor that should have been replaced months ago. Possibly a lagging Press Unit, or a Flat Work Ironer that needs a lift. In justice to your other duties, you can't spend a lot of time on the problem. What you *can* do, though, is this. Ask an American Laundry Advisor to call.

These American specialists, who have had the privilege of helping many hospitals with their laundry problems, will gladly make a careful poundage-equipment-cost survey and give you their recommendations for discussion with your Board. They will call at your convenience and their services will not obligate you in any way. Write.

AMERICAN COLLEGE OF SURGEONS

ASK FOR AN AMERICAN LAUNDRY ADVISOR

THE AMERICAN LAUNDRY MACHINERY COMPANY
SECTION AVENUE, NORWOOD, OHIO

Is it too much to hope

The Hospital, infant of all man's institutions, alone holds a place of universal veneration.

Religion began with the first thunder clap; commerce was born when one man learned he could trade more comfortably than he could defend; caves gave way to "home" when man lost his terror of echoing night in the valley. Old, old, sacred things are these, in which all the wars of all the ages have had their cause.

Yet when war comes, spires that proclaim man's piety; great cathedrals of industry that house his other gods; the cottage to which he turns for rest are only targets for the hooded emissaries of thundering death.

Brutal, blood-crazed war respects nothing — nothing except the Hospital.

Because it knows no enemies, no nationals, no creedal partisans — only Mankind in Need; because it asks no profit, fosters no propaganda, seeks no converts, grasps no power — only Serves, the Hospital in a few short centuries has achieved its signal place of honor.

Is it too much to hope that in the future, man, trudging upward, will learn to support as well as to respect.

WITH SPEED AND CERTAINTY...

WILL ROSS, Inc., Wholesale Hospital Supplies

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WARNING

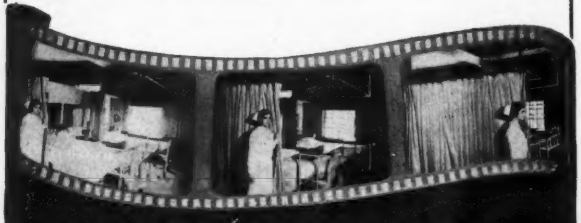
PRESENT LOW PRICES ON SCREENING EQUIPMENT ARE TEMPORARY

● Day's Curtain Screening Equipment . . . like securities . . . should be bought when prices are lowest. That time is now.

Thrifty hospital superintendents have been "watching the market" and are now rushing in their orders.

A single curtain without gaps instead of multiple curtains or floor screens. Complete privacy. One silent movement, and the patient is instantly enclosed. Yet the cost is not high nor the installation bothersome. This curtain screening equipment costs less than any other . . . inadequate . . . antiquated . . . partial partitioning.

Make those extra ward profit dollars yours . . . now . . . at the lowest possible cost.



H. L. JUDD COMPANY, Inc.
HOSPITAL DIVISION
Established 1817
87 CHAMBERS STREET - - - NEW YORK CITY

need better standards of service, administration and personnel. Such improvement would be of advantage to the entire hospital world as well as to the patients in the governmental hospitals; would lessen the differential of cost of care between local governmental and non-governmental institutions; and would facilitate a unified hospital program in each community wherein both governmental and voluntary hospitals exist.

Delegates from the League of Nations Visit Headquarters

A distinguished group of European hospital administrators and sanitarians, who were making a study tour of hospitals and health departments in North America, spent a morning at The American Hospital Association headquarters recently. The tour was under the auspices of the Health Section of the League of Nations, and the guests were accompanied by Surgeon J. O. Dean of the United States Public Health Service.

The group included:

Monsieur F. C. Boudreau,
Assistant Director of the Health Section,
League of Nations, Geneva.

Dr. L. S. Fridericia,
Professor of Hygiene,
University of Copenhagen.

Dr. J. Parisot,
Professor of Hygiene,
University of Nancy.

Prof. R. M. F. Picken,
Welsh National School of Medicine,
Cardiff.

Dr. E. Rietz,
Chief Medical Officer of Health,
Stockholm.

Dr. H. van der Kaa,
Chief Health Inspector of the Netherlands,
The Hague.

Dr. B. Borcic,
Chief of Health Service,
Jugoslavia.

Dr. Dela Johan,
Secretary of State, Director of State Institute,
Hungary, Budapest.

Our visitors were greatly interested in the organization and work of the Association, the service of the library, and the various activities of the Association. The visitors were received by Dr. Michael M. Davis and the Executive Secretary.

Seidel Answers the Hospital Dessert Question . . . *Deliciously*

With the Crowning Achievement in a Prepared Delicacy

Unsurpassed for brilliance, purity, texture and delicious fruit flavors.

A valuable energy food that makes an important supplementary protein contribution. Its name is a promise of goodness.

If buying a cheaper grade of gelatine dessert is false economy, why not use *True Fruit Gelatine Dessert* which costs only a trifle more to serve?

Seidel's True Fruit Gelatine Dessert

Even served plain without cream or fruit, the patients and employes relish the new and exclusive flavor creations of *True Fruit Gelatine Dessert.*

An improved richness and distinctiveness of flavor is readily noticeable even in the common flavors.

Besides appetizing salads, many delicious desserts and entrees can be made with little labor or cost.

Once you have made comparative tests you will understand why *Seidel's True Fruit Gelatine Dessert* is so popular in the largest and finest hospitals.

A liberal January deal now in effect. Write for particulars.

Generous samples sent free upon request.

Packed in two handy sizes.
Case (Gallon size) 6 doz. 2 Lb. tins.
Case (Large size) 1 doz. 12 Lb. tins.

Order a Trial Case Today from Ad. Seidel & Sons Satisfaction Guaranteed

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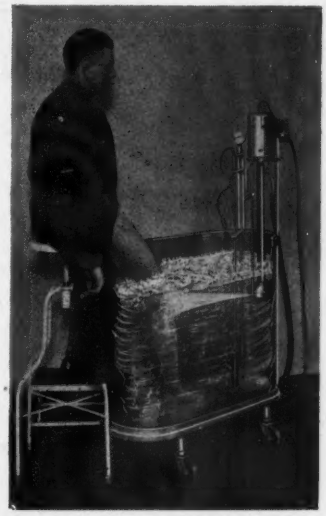

Combination Arm and Leg Bath

A Portable Hydro-Massage Whirlpool Bath

Devised by Norman E. Titus, M.D., N. Y.

An improved Portable Hydro-Massage Whirlpool Bath embodying the following features:

Only one Tank required for treating arm, leg and hip cases.

An Electric Turbine producing an under-water jet which can be applied directly to affected part, greatly intensifying hydro-massage and heat effects of bath.

An Immersion Heater to maintain temperature of water.

An Electric Pump for emptying tank.

A quick-acting Dial Thermometer.

A Monel Metal Arm Rest provided for supporting arm in tank. A Monel Metal Seat also provided which may be suspended in tank for treatment of hip and pelvic injuries, and low-back pains.

There is a decided need for a Portable Hydro-Massage Whirlpool Bath of this type in Hospitals, Orthopaedic and Industrial Clinics. It has proven of distinct value and is the treatment of choice in painful injuries of the extremities, sprains, stiff joints, and especially in fracture cases after the removal of plaster cast, also for the treatment of burns, infections, ulcers, and suppurative wounds.

The Titus Portable Hydro-Massage Whirlpool Bath is always ready for immediate use. Requires no plumbing job to install and is inexpensive to operate, as it uses only the required amount of water for each treatment. Particularly practical because it is easily transportable from one room to another, or to the bedside.

ILLE ELECTRIC CORPORATION
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Precision Sterilization Made Possible by Installation of Temperature Measuring Devices

SINCE THE INTRODUCTION of pressure steam sterilization, more than 30 years ago, no improvement in sterilizing apparatus ranks in far reaching importance to surgery with the temperature method of gauging performance, as introduced at the Milwaukee Convention in 1933. The process is of such vital importance to hospitals that further analysis is justified.

Engineers have known for many years that the temperature of steam under pressure is not necessarily that indicated by the pressure gauge, but is modified by the amount of air remaining in the chamber. In sterilizers the difference in temperatures is emphasized by what might be termed stratification, due to the reluctance of steam and air to mix in the chamber, and the relatively greater weight of the air which causes it to gravitate—either as pure air or air mixed with steam—below pure steam in the upper areas. During a long period of time in a chamber inadequately evacuated of air, temperatures within the load may easily vary as much as 50 to 100 degrees between the top and the bottom areas.

Few hospital people have more than a vague perception of how radically this detail affects sterilization. The old standardized practice of reliance upon partial evacuation of air by creation of a minor degree of vacuum and dependence upon the pressure gauge to indicate temperature leaves opportunity for errors of the most serious kind. Under that system of operation it is not uncommon to find internal load temperature lower than that of boiling water.

Nearly all indicating pressure gauges are calibrated in both pressure and temperature—the temperature of pure steam at various pressures. Recording pressure instruments in which great faith is normally placed have similar calibration on the record charts. Operators most naturally assume that these temperature indications are authentic, indicative of temperatures within the chamber. They are—only when the sterilizing chamber has been completely exhausted of air and filled with pure steam. Formerly there was no known method of gauging this condition.

The steam used in all pressure sterilizers carries always the adequate degree of moisture necessary for rapid destruction of organisms at relatively low temperature. The only other factor in which the operator is remotely interested is—the temperature of the applied medium. The obvious thing is to measure it—at some critical point.

That critical point has been determined beyond question. It is the discharge system leading from the bottom of the chamber, through which all air and condensate must flow as they are discharged by gravity and pressure. There is nothing mysterious about it; on the contrary it is the most logical thing imaginable. Air is much heavier than steam—gravitates unfailingly below the steam, flows into the discharge system in advance of the steam. Temperature measured at that location must under all conditions reflect that of the coolest medium with which the chamber is filled.

If air discharge is interrupted for any reason at all, the pressure will advance just the same, but the thermometer in the discharge will show no advance in temperature because the discharge is filled with air. The operator has unmistakable evidence of that fault which is the direct cause of nearly all sterilization failures. If the line is clogged, the usual, most common source of interruption, the protective screen on the inside of the chamber at the entrance to the discharge system must be cleaned. If the thermostatic valve is stuck or broken or fatigued, it must be corrected or replaced by a mechanic before the sterilizer is used. In any event the sterilizer is positively unsafe for use until the interruption, whatever it may be, has been cleared so that the thermometer can register temperature within the sterilizing range.

If the air discharge system is functioning properly, the thermometer in the discharge line will show a rapid advance in temperature as the chamber is evacuated of air until relatively pure steam is indicated. Then only can the period of sterilization be assumed to begin. That is positive, unfailing evidence that the load is being permeated with steam of the right character and the greatest possible sterilizing influence will be exerted, for the pressure carried. At 15 pounds pressure, the temperature should advance to approximately 250 degrees F., sufficient for any kind of surgical supplies and not hot enough to injure rubber goods or other delicate materials.

Overzealous salesmen have frequently advanced the theory that the so-called automatic air and con-

A Professional Magnet

Drawing hundreds of patients who will remain thankful, appreciative, long-time friends.

Your Physicians, Too . . .

will appreciate the opportunity to send their patients to your institution for Clark's Hyperpyrexator Treatent.

FULLY CONFIRMED RESULTS

The clinical results in fever therapy as recorded in the leading medical and hospital papers assures results in your use of friendly fever.

The results of electropyrexia have been definitely confirmed and the public are informed as a result of articles which have appeared in leading lay magazines.

CLARK'S HYPERPYREXATOR PAYS FOR ITSELF

- Your investment in this apparatus, which has been approved by over two hundred installations here and abroad, will be amortized out of income.
- The Clark Hyperpyrexator is the original humid air-conditioned apparatus for elevation of body temperature with graphic and automatic control at any desired degree.
- This apparatus is approved for loans under the F. H. A. or you may purchase on our convenient budget plan.

Mail the Coupon Now

and let us help expand your influence and income by providing fever treatments demanded by those who can and are anxious to pay for results.

THE ELECTRICAL RESEARCH LABORATORIES, Warren, Pa. AHJ

Date .....

☐ I would like to have available reprints on the use of your apparatus in the production of electropyrexia.
☐ Would also like to have prices, terms and specifications.
☐ Would appreciate learning about your budget plan of purchase.

Signed ..... Title .....

Street .....

City ..... State .....

densate discharge systems, such as are used in some form on all modern sterilizers, eliminate the need for temperature measurements—permit safe use of sterilizers in which performance is gauged by pressure. This is an extremely dangerous assumption because the thermostats which actuate such systems are subject to fatigue, sticking and breakage, and the system is constantly subject to clogging from lint and sediment which drain in from the chamber. The system may close off completely or in part at any time and safe sterilization demands some positive measurement of temperature.

When the temperature of the applied steam is measured, as described, there is no longer any desirable purpose in maintaining sterilizing pressure higher than 15 to 17 pounds (250-254 degrees F.) for any surgical supplies. Higher pressures have been carried in the past for no reason other than to overcome the inaccuracies of reliance upon pressure. Similarly, the period of exposure, even for heavy loads, need not exceed 30 minutes if the loads are prepared and placed in the sterilizer in accordance with the clearly expressed methods described in Underwood's "Textbook of Sterilization."

These statements about temperature and periods of exposure are backed by exhaustive tests conducted by the Department of Pathology, Western Reserve University, in which it was shown that resistant pathogenic spores such as Cl. Welchii, B. septicus and Cl. Novyi were destroyed in steam at 230 degrees F. within 10 minutes, leaving a large margin of safety when sterilizing temperature is maintained at 240-250 degrees F. The commonly encountered vegetative organisms are destroyed at still lower steam temperatures and in less time. Accurate potentiometer tests, indicating temperatures within loads at most inaccessible locations, have been made in many, many hospitals to determine periods of exposure. These show, when temperature controlled machines are used, without exception, that properly arranged loads are thoroughly permeated with steam at adequate temperature for safe sterilization allowing a nice margin of safety within 30 minutes.

Precision sterilization is now easily possible and radical savings can safely be inaugurated in every hospital by the introduction of this system of control by temperature. Nearly all older sterilizers, at least those of reasonably good design otherwise, can be modernized in this respect—made to operate perfectly. Owners are cautioned, however, against the application of temperature measuring devices which are not permanently accurate, or which may fatigue or otherwise get out of adjustment. There is no known good substitute for the mercury thermometer, but even in applying a mercury thermometer, the manufacturer should be required to guarantee its accuracy at the sterilizing range, at least, certainly within one degree.

Plumbing Hazards in Hospitals

FOLLOWING THE EPIDEMIC of amoebic dysentery that originated in Chicago during the Century of Progress Exposition, the Board of Health of Chicago put on a special force of thirty-six plumbing inspectors to check factories, hospitals, hotels, apartment houses, office buildings, and such public buildings as to cross-connections and other plumbing defects that might lead to the contamination of the potable water supply.

While numerous cross-connections and leaking check valves between the city supply and private supplies subject to contamination were discovered, the attention of the Department of Health also was turned to structural defects in the plumbing fixtures themselves. It was the conclusion of health officials that every water closet that had been installed in the past and connected to a common riser with a float valve was a potential source for the spreading of water-borne diseases.

In this instance, contamination of the supply resulted from back syphonage, due to a vacuum in the supply line caused by the lowering of the water level in the supply riser, following a sudden drop of water pressure. This drop of pressure would result from any unusual demand, such as the opening of a street hydrant, the simultaneous flushing of a battery of toilets, or other such heavy demand, which may occur at various times. Further study showed that back syphonage also could draw contaminated water into the domestic supply from wash stands, drain traps, sterilizers, and like fixtures, when the inlet from the domestic supply was either directly connected or at times might be below the level of the contaminated water.

Following the disclosure of these conditions, the Board of Health of Chicago passed a regulation prohibiting the installation of any plumbing fixture or appliance unless the flushometer or other valve is set above the fixture in such a manner as to prevent pollution of the domestic supply. They also passed regulations against cross-connections where there

RIES-LEWIS

A REMARKABLE NEW LIGHT WITH A

"COOL ZONE"

MONT R. REID

A MAJOR OPERATING TABLE WITH

HEAD-END CONTROL

TWO OUTSTANDING ACHIEVEMENTS IN OPERATIVE EQUIPMENT

THE RIES-LEWIS LIGHT

Through this advertisement we announce an improved model of the now famous Ries-Lewis Shadowless Light. The original illuminating system, considered faultless, remains the same—but, an entirely new method of suspension, unique in its conception, brings perfect adaptability to all classes of surgical procedure.

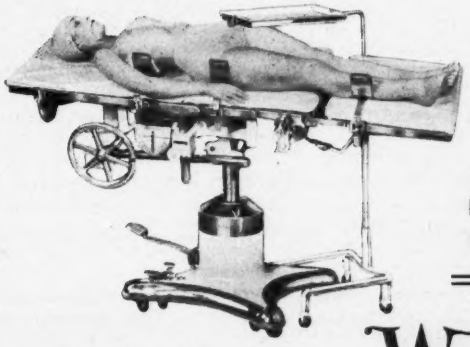
The reflector is suspended in a series of concentric rings, diametrically fulcrum mounted to permit an universal adjustability with perfect equilibrium. A ball-bearing turn-table with rotating contacts allows the Light to be swung in a complete circle without danger of twisting electric wires. Mercury contact switches give complete protection against explosion of anesthetic gases. A new circular fully illustrates and describes the new Ries-Lewis Light. Write for it today.

THE MONT R. REID TABLE

When we say the New Mont R. Reid Table is controlled *entirely* from the head end—that it is capable of assuming every operative position, we mean just that. Built on new mechanical principles gleaned from every phase of industry, this wonderful new table brings to you unusual adaptability and outstanding ease of operation. There is no other table like it.

In its construction, the Mont R. Reid Table is notable for the excellence of both workmanship and materials. So-called "production methods" are banned. Reid Tables are *custom-made*, which means that all moving parts are hand-finished and fitted, just as they are in the finest of fine motor cars.

If you contemplate buying an operating table, let us tell you just how the Mont R. Reid can serve you better.



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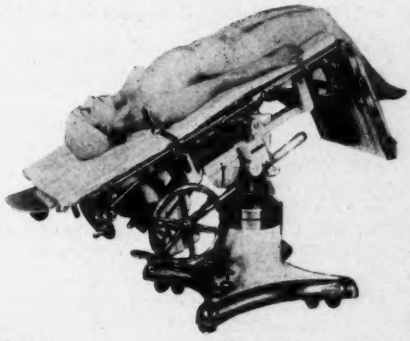

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THE MAX WOCHER & SON CO.

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COMPLETE EQUIPMENT FOR HOSPITALS

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RATES: 8 cents a word. The minimum advertisement is 25 words at a cost of $2.00, including address or key number of 5 words. All answers to keyed advertisements will be forwarded. Classified advertising copy must be received at the office of *HOSPITALS*, 18 E. Division St., Chicago, Illinois, by the 15th of the month preceding issue.

THE FOLLOWING CLASS OF ADVERTISEMENTS WILL BE ACCEPTED:

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POSITIONS WANTED THROUGH PLACEMENT BUREAUS.
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POSITIONS OPEN THROUGH PLACEMENT BUREAUS.
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FOR SALE.

Commercial announcements accepted at the same rate. Remittance must accompany classified advertisements.

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HOSPITAL SUPERINTENDENT—R. N. 20 years' experience. In last position over 10 years. Excellent references. North and Central States preferred. Address AA1, American Hospitals.

POSITIONS OPEN

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Cleveland, Ohio

SUPERINTENDENT OF NURSES—150-bed eastern hospital. College credits and experience. Graduate staff.

SUPERINTENDENT OF NURSES—Jewish eastern hospital, 85 beds, with graduate staff. Only Jewish graduates with experience considered. Salary $150, maintenance.

ASSISTANT SUPERINTENDENT OF NURSES—Administrative experience. 150-bed New Jersey hospital. Salary $125, maintenance.

ASSISTANT SUPERINTENDENT OF NURSES — 150-bed New York hospital. Graduate staff. Open January.

INSTRUCTOR SCIENCE—With college degree. 150-bed hospital, New York State.

INSTRUCTOR PRINCIPLES AND PRACTICE OF NURSING—300-bed Sisters' hospital, mid-western states. Open school year. Salary $125, maintenance.

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30 North Michigan Avenue
Chicago

SUPERINTENDENT—North Carolina hospital.

SUPERINTENDENTS OF NURSES—(a) Iowa hospital. (b) Under 40; 100-bed Western hospital. (c) Also qualified anesthesia; delightfully located 100-bed Southern hospital.

SUPERVISOR to take charge 32-bed contagious unit; special training necessary; large hospital, East.

OPERATING ROOM SUPERVISOR prepared to teach; Florida hospital.

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NEW YORK MEDICAL EXCHANGE (agency)
Patricia Edgerly, Director
489 Fifth Avenue
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SUPERINTENDENT—(Man) missionary hospital, Protestant, West Indies, knowledge of Spanish, $2,000 with house.

ASSISTANT SUPERINTENDENT—(Man) large hospital, New York City, must have served as assistant in large or superintendent of small hospital, $2,500.

DIRECTRESS OF NURSES—Psychiatric state hospital, salary open.

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Hospital Furniture

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Physicians' Offices

HOSPITAL LIQUIDS, INC.

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Manufacturers of

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in

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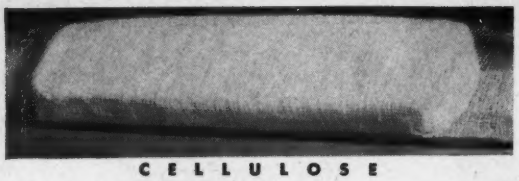
HOSPITAL NAPKINS



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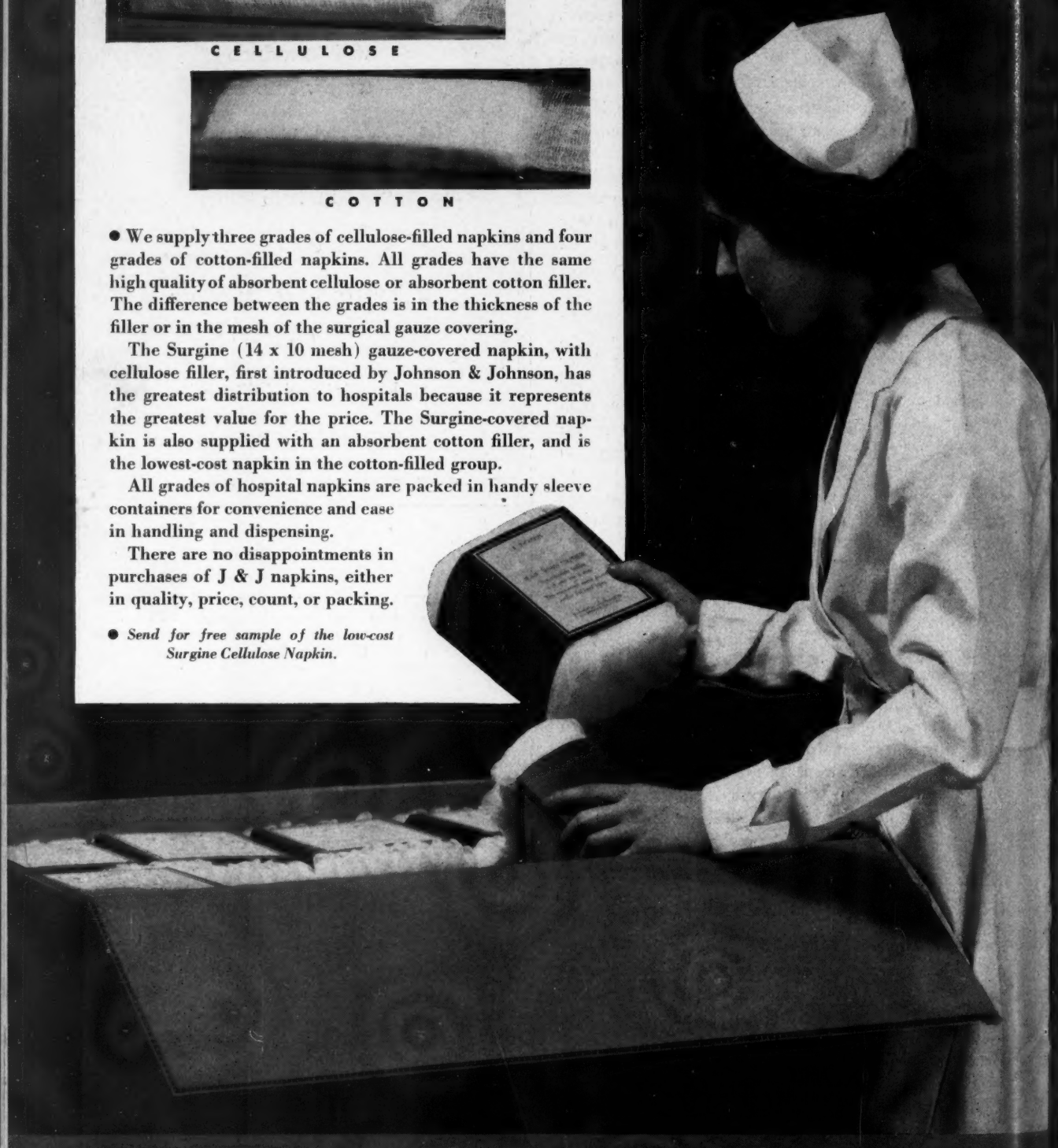
● We supply three grades of cellulose-filled napkins and four grades of cotton-filled napkins. All grades have the same high quality of absorbent cellulose or absorbent cotton filler. The difference between the grades is in the thickness of the filler or in the mesh of the surgical gauze covering.

The Surgine (14 x 10 mesh) gauze-covered napkin, with cellulose filler, first introduced by Johnson & Johnson, has the greatest distribution to hospitals because it represents the greatest value for the price. The Surgine-covered napkin is also supplied with an absorbent cotton filler, and is the lowest-cost napkin in the cotton-filled group.

All grades of hospital napkins are packed in handy sleeve containers for convenience and ease in handling and dispensing.

There are no disappointments in purchases of J & J napkins, either in quality, price, count, or packing.

● *Send for free sample of the low-cost Surgine Cellulose Napkin.*



HOSPITAL DIVISION

Johnson & Johnson

NEW BRUNSWICK, N. J. CHICAGO, ILL.

The President

and

Board of Trustees

of the

American Hospital Association

Extend to all hospitals the Season's Greetings and their best wishes for success and prosperity during 1936. May all the blessings that reward an unfailing service to the infirm and sick surround them throughout the New Year.

They wish for the members of our Association health, happiness and prosperity in rich abundance. May the New Year bring encouragement in full measure, confidence in the present, and a hope renewed for each of them and for the institutions which they serve.

HOSPITALS

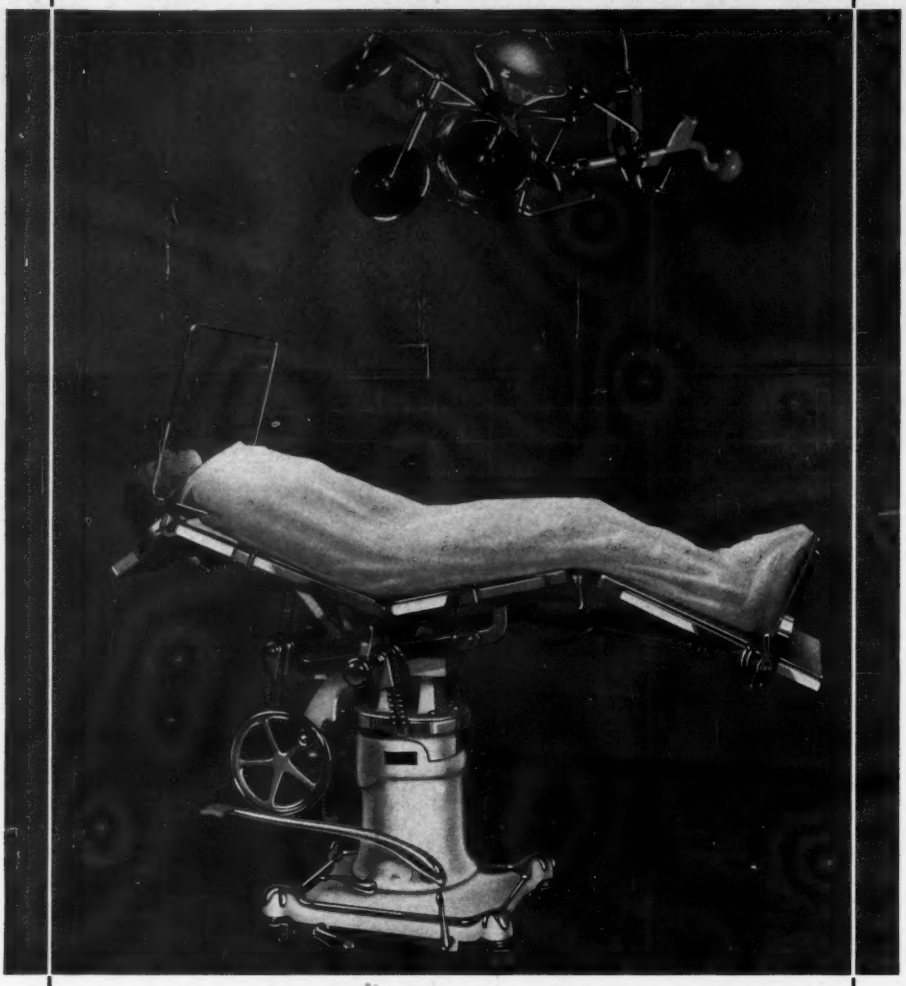
SOCIALSCIENCES

The Journal of
The American Hospital Association

A Magazine for the Hospitals of the United States and Canada

Vol. 10. No. 3 *March, 1936*

A *Surgical Ensemble*
THAT AIDS TECHNIQUE



The SCANLAN-BALFOUR Table and the OPERAY MULTIBEAM

. . . The new Scanlan-Balfour operating table provides comfortable support of patient with proper relaxation . . is easily controlled by rapid, positive, quiet mechanism . . is firmly rigid in all positions. Gives life-long dependable service in the operating room.

. . . The Operay Multibeam suspended from flexible swivel offset hanger directs powerful illumination into the surgical cavity regardless of its location or angle . . eliminates necessity for disturbing patient or relocating table and operating room set-up to accommodate light.

SCANLAN-MORRIS COMPANY

MADISON, WISCONSIN, U. S. A.

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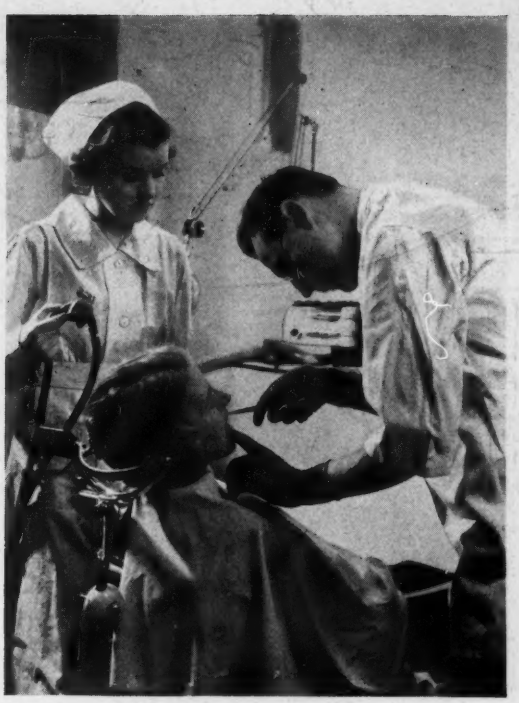


ANNOUNCING . . .

D&G Dental Sutures

WE are pleased to present to the profession two groups of needled sutures which have been specially designed for dental surgery.

Both are in hermetically sealed glass tubes, heat sterilized by the Claustro-Thermal* method, and ready for immediate use.

The sutures in the first group are swaged into the hollow end of eyeless, Atraumatic* needles having a specially designed cutting point. Atraumatic sutures minimize tissue trauma, and eliminate the tedious and difficult threading of small eyed needles.

The second group comprises a variety of suture materials which are threaded on needles of the conventional eyed type with cutting edges.

NEEDLE SIZES AND SHAPES

Three sizes of needles are available, as well as a variety of materials. Information and descriptive literature will be sent on request.

* Trade-mark of Davis & Geck, Inc

DAVIS & GECK, INC., 217 DUFFIELD STREET, BROOKLYN, NEW YORK

densate discharge systems, such as are used in some form on all modern sterilizers, eliminate the need for temperature measurements—permit safe use of sterilizers in which performance is gauged by pressure. This is an extremely dangerous assumption because the thermostats which actuate such systems are subject to fatigue, sticking and breakage, and the system is constantly subject to clogging from lint and sediment which drain in from the chamber. The system may close off completely or in part at any time and safe sterilization demands some positive measurement of temperature.

When the temperature of the applied steam is measured, as described, there is no longer any desirable purpose in maintaining sterilizing pressure higher than 15 to 17 pounds (250-254 degrees F.) for any surgical supplies. Higher pressures have been carried in the past for no reason other than to overcome the inaccuracies of reliance upon pressure. Similarly, the period of exposure, even for heavy loads, need not exceed 30 minutes if the loads are prepared and placed in the sterilizer in accordance with the clearly expressed methods described in Underwood's "Textbook of Sterilization."

These statements about temperature and periods of exposure are backed by exhaustive tests conducted by the Department of Pathology, Western Reserve University, in which it was shown that resistant pathogenic spores such as Cl. Welchii, B. septicus and Cl. Novyi were destroyed in steam at 230 degrees F. within 10 minutes, leaving a large margin of safety when sterilizing temperature is maintained at 240-250 degrees F. The commonly encountered vegetative organisms are destroyed at still lower steam temperatures and in less time. Accurate potentiometer tests, indicating temperatures within loads at most inaccessible locations, have been made in many, many hospitals to determine periods of exposure. These show, when temperature controlled machines are used, without exception, that properly arranged loads are thoroughly permeated with steam at adequate temperature for safe sterilization allowing a nice margin of safety within 30 minutes.

Precision sterilization is now easily possible and radical savings can safely be inaugurated in every hospital by the introduction of this system of control by temperature. Nearly all older sterilizers, at least those of reasonably good design otherwise, can be modernized in this respect—made to operate perfectly. Owners are cautioned, however, against the application of temperature measuring devices which are not permanently accurate, or which may fatigue or otherwise get out of adjustment. There is no known good substitute for the mercury thermometer, but even in applying a mercury thermometer, the manufacturer should be required to guarantee its accuracy at the sterilizing range, at least, certainly within one degree.

Plumbing Hazards in Hospitals

FOLLOWING THE EPIDEMIC of amoebic dysentery that originated in Chicago during the Century of Progress Exposition, the Board of Health of Chicago put on a special force of thirty-six plumbing inspectors to check factories, hospitals, hotels, apartment houses, office buildings, and such public buildings as to cross-connections and other plumbing defects that might lead to the contamination of the potable water supply.

While numerous cross-connections and leaking check valves between the city supply and private supplies subject to contamination were discovered, the attention of the Department of Health also was turned to structural defects in the plumbing fixtures themselves. It was the conclusion of health officials that every water closet that had been installed in the past and connected to a common riser with a float valve was a potential source for the spreading of water-borne diseases.

In this instance, contamination of the supply resulted from back syphonage, due to a vacuum in the supply line caused by the lowering of the water level in the supply riser, following a sudden drop of water pressure. This drop of pressure would result from any unusual demand, such as the opening of a street hydrant, the simultaneous flushing of a battery of toilets, or other such heavy demand, which may occur at various times. Further study showed that back syphonage also could draw contaminated water into the domestic supply from wash stands, drain traps, sterilizers, and like fixtures, when the inlet from the domestic supply was either directly connected or at times might be below the level of the contaminated water.

Following the disclosure of these conditions, the Board of Health of Chicago passed a regulation prohibiting the installation of any plumbing fixture or appliance unless the flushometer or other valve is set above the fixture in such a manner as to prevent pollution of the domestic supply. They also passed regulations against cross-connections where there

RIES-LEWIS

A REMARKABLE NEW LIGHT WITH A

"COOL ZONE"

MONT R. REID

A MAJOR OPERATING TABLE WITH

HEAD-END CONTROL

TWO OUTSTANDING ACHIEVEMENTS IN OPERATIVE EQUIPMENT

THE RIES-LEWIS LIGHT

Through this advertisement we announce an improved model of the now famous Ries-Lewis Shadowless Light. The original illuminating system, considered faultless, remains the same—but, an entirely new method of suspension, unique in its conception, brings perfect adaptability to all classes of surgical procedure.

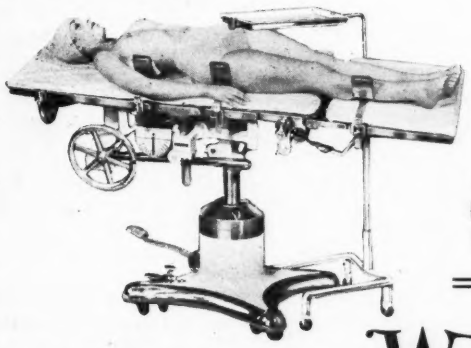
The reflector is suspended in a series of concentric rings, diametrically fulcrum mounted to permit an universal adjustability with perfect equilibrium. A ball-bearing turn-table with rotating contacts allows the Light to be swung in a complete circle without danger of twisting electric wires. Mercury contact switches give complete protection against explosion of anesthetic gases. A new circular fully illustrates and describes the new Ries-Lewis Light. Write for it today.

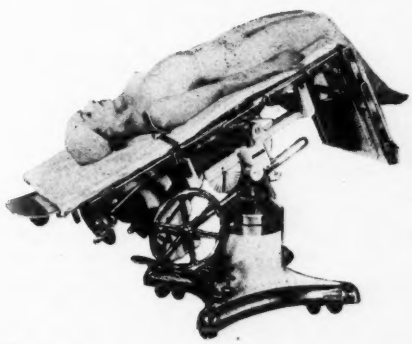
THE MONT R. REID TABLE

When we say the New Mont R. Reid Table is controlled *entirely* from the head end—that it is capable of assuming every operative position, we mean just that. Built on new mechanical principles gleaned from every phase of industry, this wonderful new table brings to you unusual adaptability and outstanding ease of operation. There is no other table like it.

In its construction, the Mont R. Reid Table is notable for the excellence of both workmanship and materials. So-called "production methods" are banned. Reid Tables are *custom-made*, which means that all moving parts are hand-finished and fitted, just as they are in the finest of fine motor cars.

If you contemplate buying an operating table, let us tell you just how the Mont R. Reid can serve you better.





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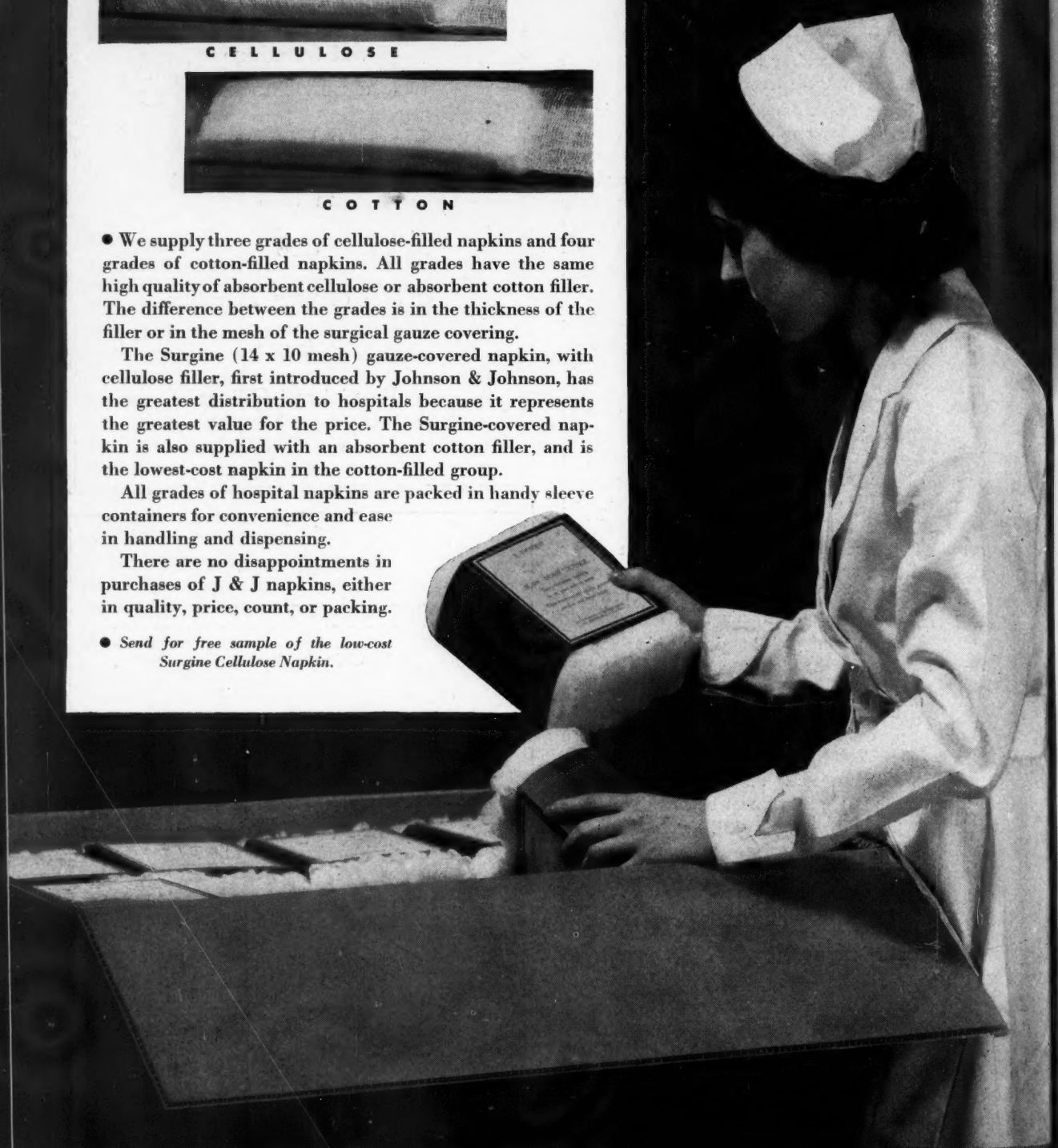

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